

ABSTRACT

Title of Thesis: Engaging the Abandoned | *Blurring the Edge of
Baltimore's Forgotten Fortresses*

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Baltimore's Harbor Defense Network consists of five fortresses that were built during the 19th century to protect the city in times of war. In the early 20th century, the need for these forts became less relevant and they were abandoned. Over time, two of these forts, Forts Armistead and Carroll, have faded into the background of the changing contexts around them, rendering them neglected, forgotten, and isolated from the public. This begs the question: how do these forts engage with an environment that no longer needs them?

This thesis will explore the creation of a spatial sequence through these forts that will re-engage the public with these relics while also re-engaging these forts with their present contexts. This proposal aims to revive the relationship between these two forts and to reimagine the way the public experiences these sites to strengthen their presence for future generations.

ENGAGING THE ABANDONED | BLURRING THE EDGE OF BALTIMORE'S
FORGOTTEN FORTRESSES

by

Maryssa Lydia Timberlake

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
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Dedication

I would like to dedicate this work to my Mother and Father: this thesis is a testament to the passions you both instilled in me. Thank you Mom for passing on your appreciation for design and the environment. Thank you Dad for instilling in me a love of history and exploration of abandoned relics of the past.

Acknowledgements

I would like to thank my entire committee, Jana Vandergoot, Peter Noonan, and Brian Kelly for their guidance during this process and for challenging me throughout my exploration.

Thank you to all of my studio mates at the School of Architecture for providing thoughtful critique and assistance, as well as comedic relief, throughout this semester. Thank you to my friend Kyle Semon, from our days in undergraduate studios to long distance critique sessions on my graduate thesis, you have always supported and provided insight onto my design work.

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1 | Context

Historic Context

Baltimore City was established on the banks of Maryland's Patapsco River, creating a sheltered harbor and major trade point off of the Chesapeake Bay. As a key port city, Baltimore was viewed as a valuable asset that needed to be properly defended. The city's first fortification, Fort McHenry, was built in 1794 at the edge of the city's Inner Harbor as part of the government funded "First System" (1794-1800) of nationwide defensive infrastructure¹. The United States used coastal fortifications as an efficient means of defending key port cities from incoming attack to compensate for their lack of a strong Navy. This proved to be true in 1814 when Fort McHenry withstood a 25-hour British Naval siege during the War of 1812². The Fort suffered little damage and performed strongly as the city's first line of coastal defense.

As Baltimore evolved into a powerful industrial port city in the early 1800's, it became apparent that it required a stronger defense system. In 1848, as a part of the "Third System" of American coastal defense development (1804-1850), the government funded the construction of Fort Carroll to serve as the first Outer Harbor Defense of the Baltimore Harbor³. Between 1890-1900, the "Modern Era" or "Endicott Era" of defense development⁴, Forts Howard, Smallwood and Armistead

¹ "A Short History," Coast Defense Study Group, last modified 2012, accessed October 21, 2016, <http://cdsg.org/cdsg-journal-index/>.

² *Baltimore Harbor: A Pictorial History*, Keith, Robert C, Baltimore: Johns Hopkins University Press, 2005.

³ Coast Defense Study Group, "A Short History."

⁴ Coast Defense Study Group, "A Short History."

were added to this defense network, thereby completing Baltimore's Outer Harbor Defense System.

These forts became obsolete by the end of World War II once American Naval dominance was recognized internationally. The National Park Service restored Fort McHenry as a historic site and Forts Howard and Smallwood were transformed into thriving local parks. Forts Armistead and Carroll were abandoned by the Army and today sit in deteriorated states with their fates in the hands of Baltimore City.



Figure 1 | Baltimore Harbor Defense Network (Source: Author)

Fort Carroll

Origins

In 1848, the Army Corps of Engineers chose to build Baltimore's second fortress (after Fort McHenry) on an artificial island in the Patapsco River towards its meeting with the Chesapeake Bay. It was built in the shallow waters at Sollers Point Flats, a bar in the middle of the Patapsco, 4.5 miles from Fort McHenry. Its construction and design were preceded by Fort Sumter in Charleston, South Carolina, which was also built on an artificial island⁵. The Corps began construction of the island's foundation by driving massive piles 15 feet deep into the granite riverbed⁶. A grill was placed on the piles as it met the surface of the river's bottom, on top of which the fort's 10-foot thick rampart (wall) was built⁷. This concrete rampart is 25 feet in height and forms the boundary of the island and the fort itself, containing an area of 3.45 acres. Dredged earthen material was used to fill the area within the walls thereby creating the ground plane of the fort.

There are six ramparts at Fort Carroll, each 246 feet in length. The soldier barracks and amenities (kitchen, mess hall, bathrooms) were housed in a single tier structure along the length of one of the fort walls. The other five walls were lined with low vaulted, open air chambers that housed cannons that could be aimed through openings in the wall out towards enemy boats. The second tier is an open deck above these chambers. Three gun batteries were later added on the second tier where large,

⁵ "Fort Carroll," Maryland Department of Planning, last modified April 4, 2015, accessed October 21, 2016. <http://mht.maryland.gov>

⁶ Maryland Department of Planning, "Fort Carroll."

⁷ Maryland Department of Planning, "Fort Carroll."

long-range guns were embarked. A lighthouse was added on top of the rampart wall in 1853⁸.



Figure 2 | Original plan of Fort Carroll (Source: *Fort McHenry and Baltimore's Harbor Defenses*)

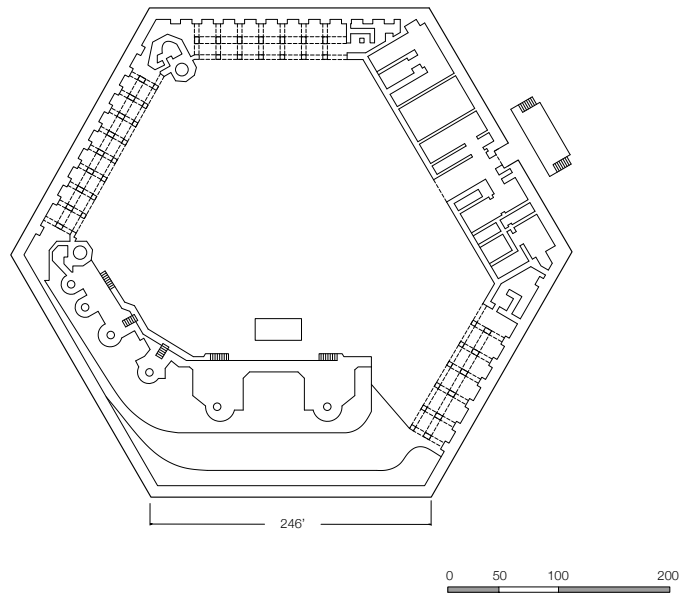


Figure 3 | Redrawn plan of Fort Carroll (Source: Author)

⁸ Maryland Department of Planning, "Fort Carroll."

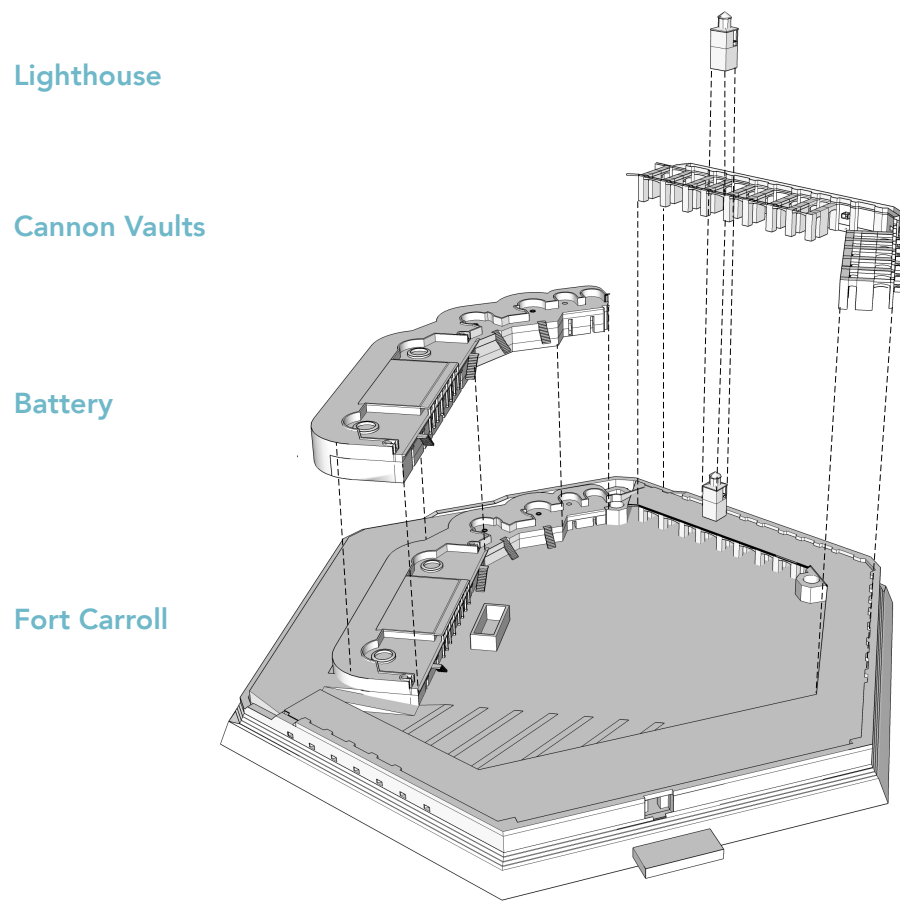


Figure 4 | Exploded Axon of Fort Carroll (Source: diagram by Author, adapted from the model by Colin Curley and Sara Harper)



Figure 5 | Aerial of Fort Carroll (Source: The Baltimore Sun)



Figure 6 | Fort Carroll after abandonment 1968 (Source: The Baltimore Sun)

Evolution

Fort Carroll saw no military battle in its time as an active fort between 1848 and 1920. It was actively manned up until 1920 and then again during World War II

as a military checkpoint of entry into the Inner Harbor⁹. Abandoned once again after the war, the island became wildly overgrown and has become host to mass populations of birds – it has widely become known as “Fort Carroll Bird Sanctuary.” Occasionally urban explorers equipped with small boats and proper climbing gear manage to get onto the fort, but these have been its only human visitors for over 70 years. The waters around the fort are regularly populated with recreational kayakers and fishing boats as well as with multiple oyster rehabilitation reefs placed by the Chesapeake Bay Foundation (CBF) in recent years.



Figure 7 | Fort Carroll 2017 (Source: Author)

The Eisenberg family of Baltimore purchased the fort from the War Department in 1958 with plans to build a casino on the island; however, those plans never materialized¹⁰. Although the National Park Service was able to place the site on

⁹ *American Coastal Defenses 1885-1950*, McGovern, Terrance and Smith, Bolling, Long Island City: Osprey Publishing Ltd., 2001.

¹⁰ Maryland Department of Planning, “Fort Carroll.”

its National Historic Trust List in 2015, no interventions have been made and the island continues to sit dormant and abandoned.

Fort Armistead

Origins

In the late 19th century, tensions escalated between Spain and the United States. Fearing potential Spanish attack, the United States began updating its coastal defense system with the creation of modern fortresses that could support advanced weaponry. Under the direction of Secretary of War George Endicott, 26 harbor defense forts were built on both the East and West coasts between 1885-1910¹¹. In 1896, Fort Armistead was built and is today considered an “Endicott Era” fort. The fort was built .75 miles across the river from Fort Carroll on Hawkins Point, a small peninsula located on the Southern shore of the Patapsco. The site was originally used for agricultural purposes and was purchased in 1881 by the US Government for the fort’s development¹².

The major identifying feature of the Endicott Fort type is its multiple earthen batteries facing out onto the water. The batteries themselves are concrete, circular stepped areas where a heavy caliber gun can be emplaced. Its circular form enables gunmen to pivot the weapon for a wider range of aim. The battery and loading platform is built into and hidden behind an artificial earthen mound to conceal the gun batteries from incoming enemy warships. At Fort Armistead there are four batteries:

¹¹ Coast Defense Study Group, “A Short History”

¹² Keith, Robert C, *Baltimore Harbor: A Pictorial History*

batteries Winchester, McFarland, Irons, and Mudge¹³. In addition to the loading platform, it has an upper and lower platform, the latter of which is stepped a level below the battery to provide access to underground ammunition storage. There is a footbridge over the sunken lower platform that creates a direct connection from the rear across to the loading platform. The fort had a direct visual connection across the river to Fort Carroll. A low sea wall was built along the perimeter of the Point and construction finally completed in 1901.



Figure 8 | Plan and section of Fort Armistead (Source: Coastal Defense Study Group)

¹³ McGovern, Terrance and Smith, Bolling, *American Coastal Defenses 1885-1950*.

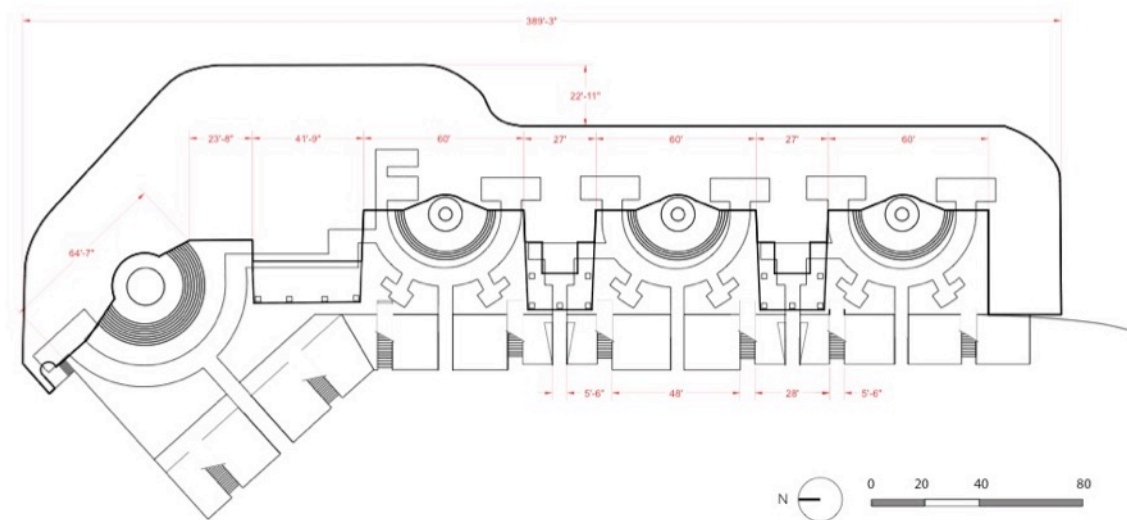


Figure 9 | Complete Plan of Fort Carroll (Source: Author)

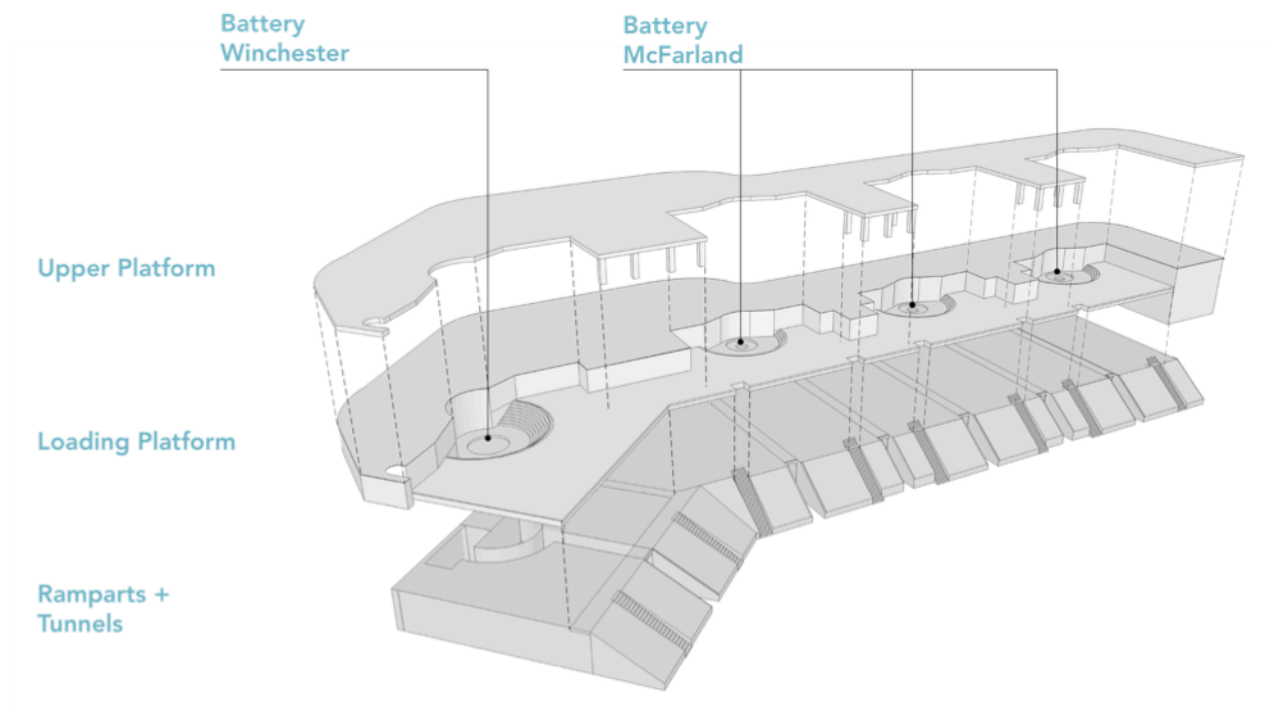


Figure 10 | Exploded Axon of Fort Armistead (Source: Author)



Figure 11 | Axon of typical Endicott Fort Type (Source: Coastal Defense Study Group)

Evolution

Like Fort Carroll, Armistead did not come under attack during its military lifetime and was abandoned in 1920. It was briefly used by the Navy to store ammunition during World War II before being given to the City of Baltimore in 1947¹⁴. Deactivated permanently as a military fort, the city developed Hawkins Point as a 45 acre recreational area called “Fort Armistead Park.” Residents of the surrounding Brooklyn Park neighborhood enjoyed going to the area often and used it for social gatherings, fishing, and swimming¹⁵. The fort remained a visible aspect of the park and patrons wandered through it, exploring the abandoned structure.

¹⁴ Keith, Robert C, *Baltimore Harbor: A Pictorial History*.

¹⁵ “Not an inviting place for a walk in the park,” Cadiz, Laura, *The Baltimore Sun*, May 2001, Accessed September 20, 2016, http://articles.baltimoresun.com/2001-05-10/news/0105100118_1_fort-armistead-cats-armistead-park/2

Over time, the park became under serviced and the fort was overgrown with a thick forest, concealing it almost completely from the rest of the park and the public. Although visitor population has decreased over the years, it remains a popular fishing area along the sea wall at its perimeter. The rehabilitation and expansion of a dock system and boat launch area in 2014 has helped to retain the relevancy of the site for recreational marine use, but the fort itself has become removed from this activity. Its hidden nature has provided a place for graffiti vandalism and other illicit activity. The contrast in uses at the park creates a cultural dividing line between the fort and riverfront area that discourages much public interaction with Fort Armistead.



Figure 12 | Panorama view of main platform, Fort Armistead (Source: author)



Figure 13 | Panorama of upper platform, Fort Armistead (Source: author)



Figure 14 | Evolution of users at Fort Armistead (Source: author)



Figure 15 | Fort Armistead in current context (Source: Author)

2 | Site

Site Conditions

Infrastructure

Fort Armistead Park is reached only by way of Fort Armistead Road, a narrow two-lane road, which breaks off from a major artery road 1.5 miles Southwest of the park. The road culminates in a large paved parking lot oriented towards the river. The terrain steps down ten feet at the edge of the lot to the concrete sea wall. The seawall ranges between 40 to 95 feet in width and is only three feet above sea level. The wall terminates to the south with long dock and boat ramp. The combination of the seawall and the boat ramp provides conditions for recreational fishing and boating, the most popular activities that occur at the site.



Figure 16 | Current aerial of Fort Armistead Park (Source: Google Earth)



Figure 17 | Site plan (Source: Author)

Topography

There are two landscape berms located on site, one with a 10' elevation change where the land dips down towards the sea wall, and the other is a 16' change from the major plane of the parking lot to the top of the fort. The Fort is built into this second berm.



Figure 18 | Topographic Elements at Fort Armistead (Source: Author)

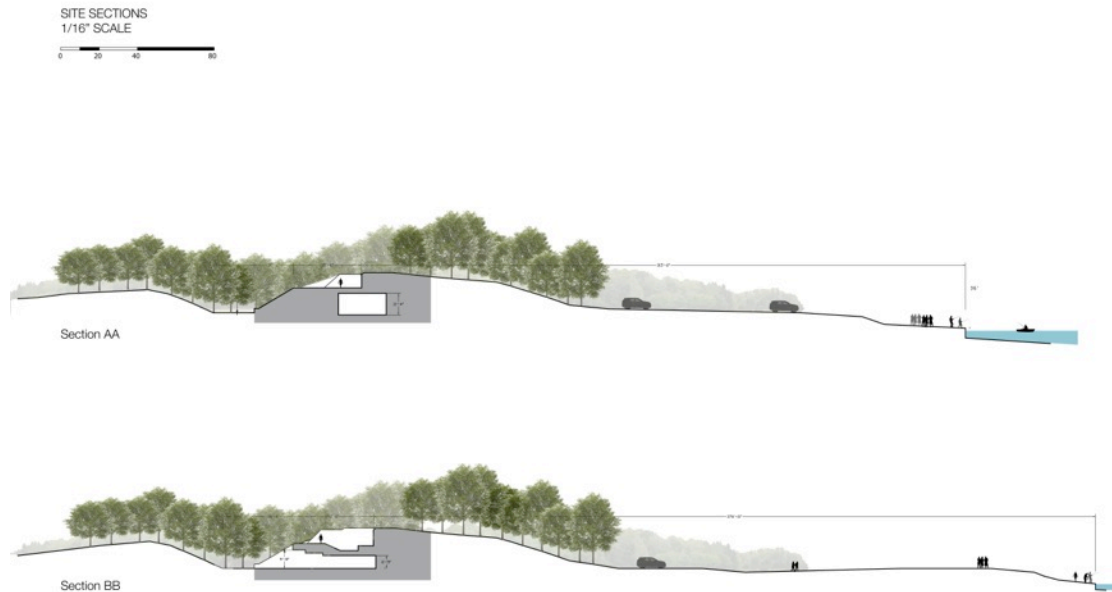


Figure 19 | Site sections of Fort Armistead (Source: Author)

Hydrology

Hawkins Point, the site of Fort Armistead, is a peninsula on the Southwest bank of the Patapsco River, located near the mouth of the river. Referencing the 100-year floodplain, it is apparent that the majority of Baltimore’s shoreline is highly vulnerable to flooding and rising sea levels. The entire seawall and fishing platform at Fort Armistead park would vanish underwater in the event of a major flood using the current floodplain. This implies that in time rising sea levels and flooding will force activity on the park to retreat further inland towards the fort. Should sea level change reach extreme levels in the near future, a greater majority of the park will be at risk of submergence as well.



Figure 20 | 100 -year floodplain (Source: Author)

The large amount of impervious surface located at the river's edge raises concern in relation to storm water management on site. The combined area of the parking lot and fishing platform is 72,052 square feet, all located at the waterfront and extending 330 feet inland. As the site is located within the Chesapeake Bay watershed and adjacent to several wetlands, storm water runoff becomes a major issue on site.

Fort Armistead

As Fort Armistead Road leads to the parking lot, it passes right by Fort Armistead itself. Concealed by a dense fabric of trees, Fort Armistead is located adjacent to the parking lot on its West edge. From the entry road, a visitor can walk through the woods on grade and enter the fort's battery platform from the north. A visitor can also enter the fort from the parking lot. Using this route, the user would walk west from the lot up the artificial hill that the fort is built into.



Figure 21 | Path of approach to Fort Armistead (Source: Author)

There is a concrete stair traversing up the hill through the wooded area that deposits the visitor on the upper platform of the fort. From here the visitors can look down onto the main battery platform and use the fort's stairs to travel down to it. The fort is surrounded on all sides by the forest layer, blocking views out to the river and views from the park into the fort.

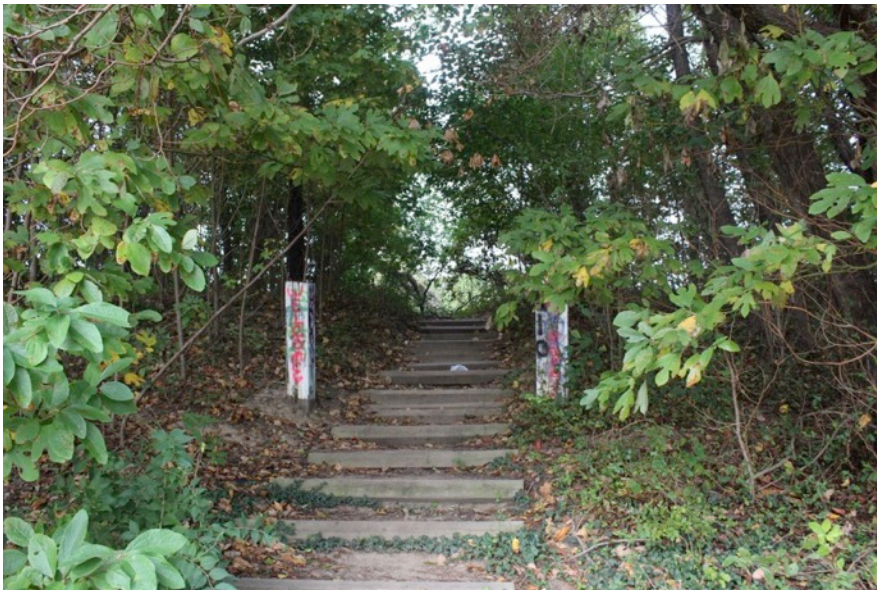


Figure 22 | Stair leading from parking area to fort (Source: author)



Figure 23 | Arrival onto the upper platform (Source: Author)

Visually, the fort's surfaces are covered in layers of graffiti tags. The batteries, which are stepped down several steps into the main platform, are concealed with overgrown shrubbery. Other than these blemishes, the structure remains fully intact.



Figure 24 | Main platform / battery loading platform (Source: Author)



Figure 25 | Main platform / battery loading platform (Source: Author)



Figure 26 | Batteries in current condition (Source: Author)

Fort Carroll

The structure remains intact at Fort Carroll: its ramparts stand strong maintaining the visual barrier into the fort itself. The fort's interior suffers from severe, dense overgrowth that completely covers the central court area and has breached out into the chambers along the ramparts. A mass population of coastal bird species inhabits the island, nesting in the dense vegetation and all along the structure.

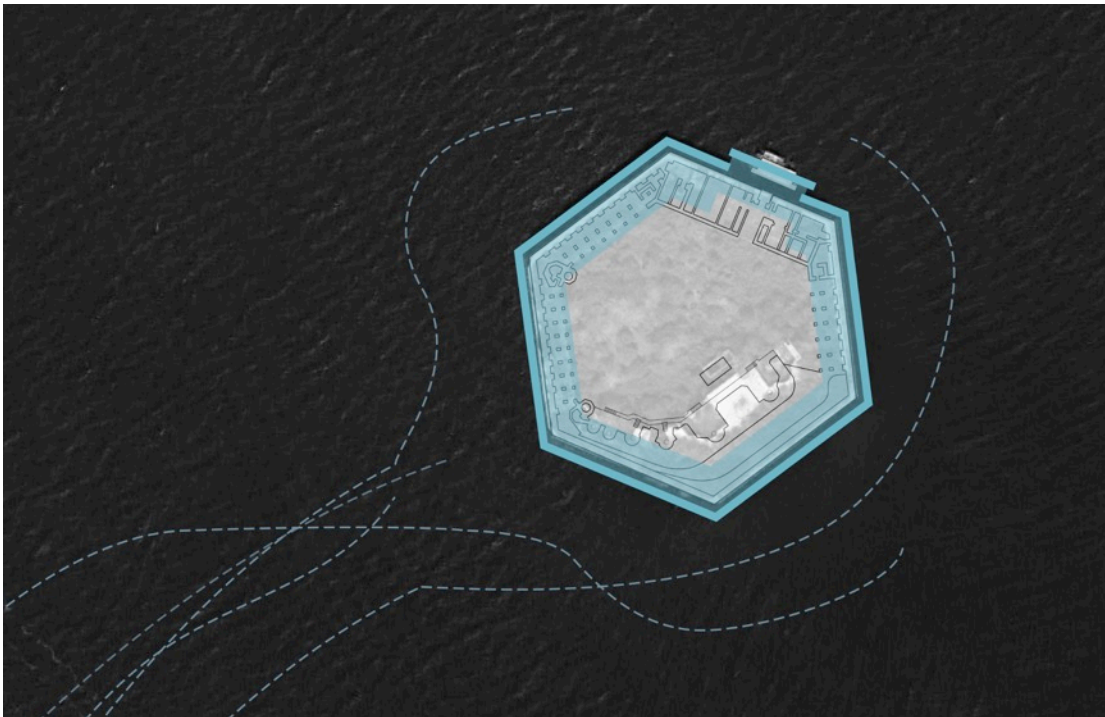


Figure 27 | Fort walls as barrier to interaction (Source: Author)

The fort remains highly inaccessible to the public. The original concrete landing dock has deteriorated significantly and is offset 17 feet from the fort's main entrance. The platform that bridged the gap between entrance and dock no longer exists. Visitors to the island must secure their boats to a part of the landing dock and then swim across the water to the main entrance. The entry to the fort is located

several feet higher than the water level meaning visitors must use rope climbing gear in order to climb to the entrance.



Figure 28 | Rampart and main entrance at Fort Carroll (Source: The Baltimore Sun)



Figure 29 | Current state of quay (Source: Dan Haga)



Figure 30 | Ascent to the main entrance (Source: Dan Haga)

User Analysis

Fort Armistead is a popular fishing spot and launch area for boaters. Visitors can use the dock at the south of the site for casting fishing lines off of, but the most popular fishing spot is along the seawall at the park's perimeter. Many visitors will drive their cars down from the parking lot to the lower seawall platform (ranging between 40-90 feet in depth) so that all of their gear and supplies are within reach. Those wishing to launch boats drive their cars to the southern coast of the site where the boat ramp is located. After launching their crafts (kayaks, canoes, and small motorboats), users can venture out to the middle of the river around Fort Carroll to fish or simply explore. Fort Carroll is located .75 miles off shore from Armistead Park, making it the closest launch point in order to reach the island.



Figure 31 | Fishing along the sea wall at Fort Armistead Park (Source: Author)



Figure 32 | Fishing dock and boat launch (Source: Author)

The concealed nature of Fort Armistead makes it a fitting location for covert activity. The fort is popular amongst graffiti artists and more recently has become a well-known location for highly illicit encounters. While the barrier created by the trees creates a physical divide between fort and site, the contrast of activities

occurring at the park creates a cultural divide as well. Visitors using the park for maritime and recreational reasons do not cross into the realm of the fort and vice versa. This further isolates the fort from its greater context and discourages public exploration of it as well.

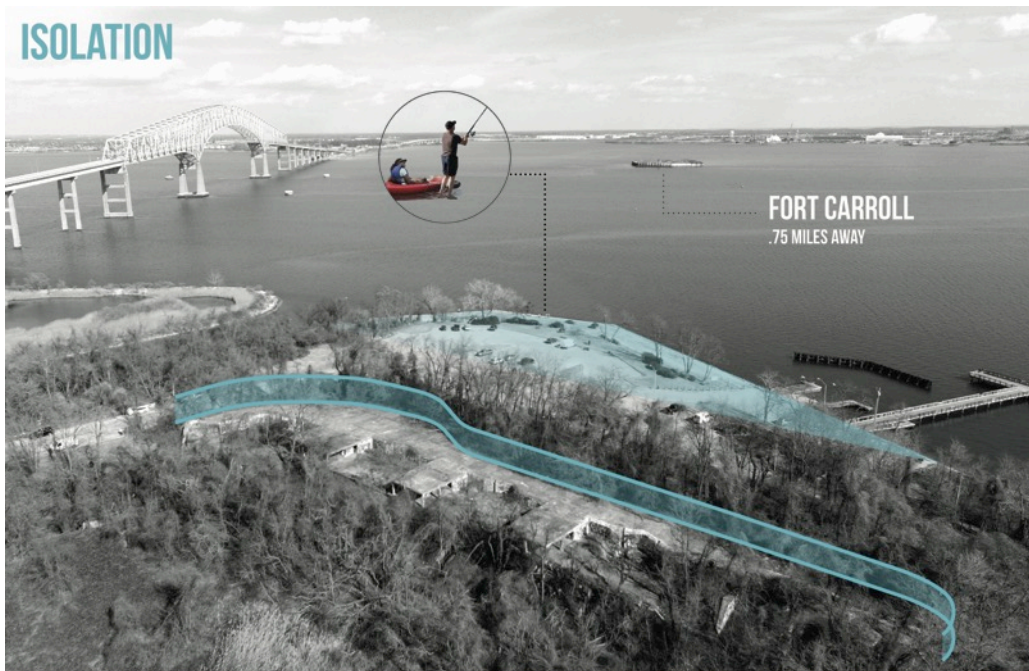


Figure 33 | Perceived edge of Fort Armistead Site (Source: Author)



Figure 34 | Conflicting activity areas (Source: Author)

Key Relationships

Running parallel to the north of Fort Armistead Road is Interstate 695. The interstate crosses the Patapsco as the Francis Scott Key Memorial Bridge (simply known as Key Bridge) and it ascends from grade at the Northwestern edge of the park and to span the river. Built in 1972, the steel bridge carries vehicular traffic and maintains a height of 185 feet at its highest point over the river¹⁶. It is an important landmark to boaters and is considered the threshold into Baltimore Harbor. Fort Armistead's location at the southern base of the bridge places it within this threshold zone. Fort Carroll, located in the middle of the river South of the bridge, is also clearly visible at the threshold.



Figure 35 | View from sea wall to Key Bridge and Fort Carroll (Source: Author)

¹⁶ Robert C Keith, *Baltimore Harbor: A Pictorial History*.

Fort Armistead Road is lined with a dense wall of trees on both sides before it terminates at the parking lot that services the recreational park. From here, there is a full, unobstructed view of the river and the Key Bridge. Visitors can also clearly see Fort Carroll across the water: there is a strong visual axis between both sites.

Historically, there was a clear view from Fort Armistead's upper platform to Fort Carroll but today the vegetated layer surrounding Armistead obstructs that view. The only existing view corridor is looking up over the tree line to see the top of the Key Bridge. This condition presents opportunities to reestablish views between the two forts as well as visibility to Fort Armistead.



Figure 36 | View from upper platform Fort Armistead platform to Key Bridge (Source: Author)



Figure 37 | Current aerial of sites (Source: Google Earth)

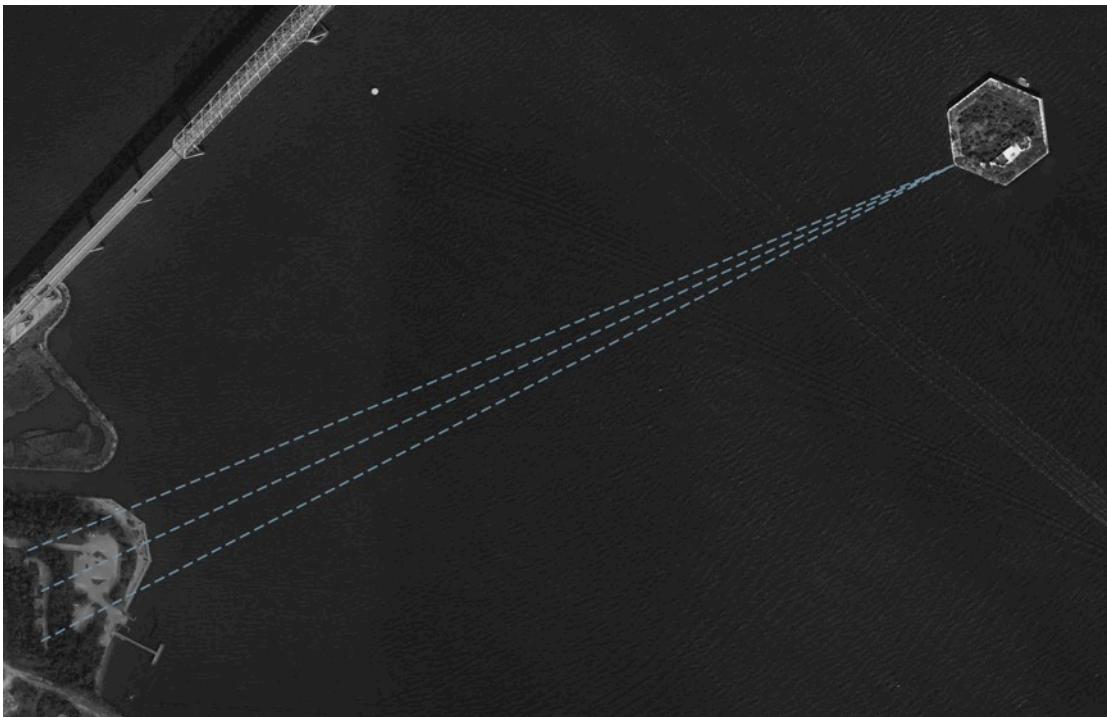


Figure 38 | Potential visual connection (Source: Author)

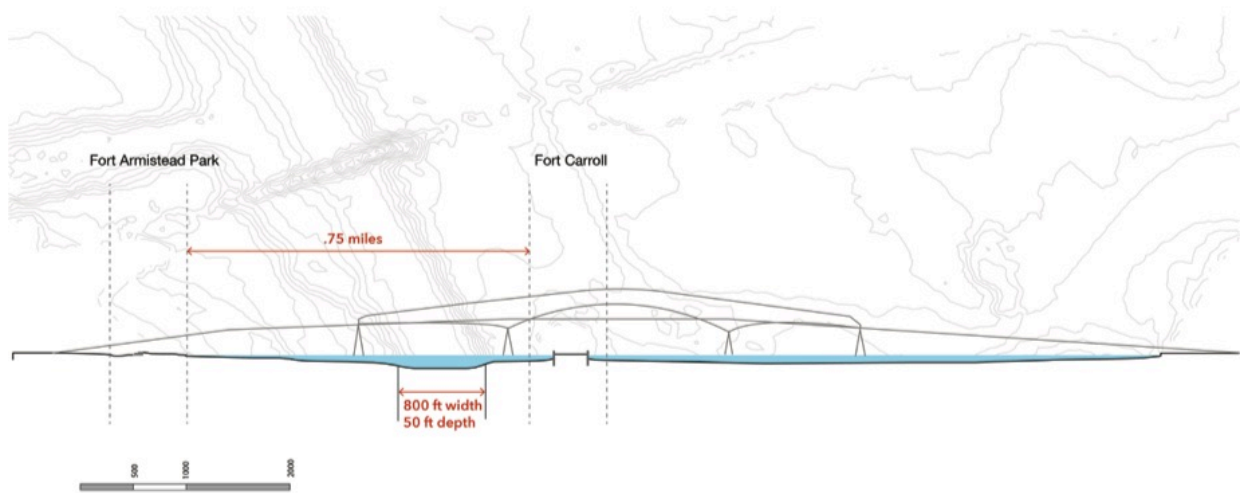


Figure 39 | Section through Patapsco River (Source: Author)

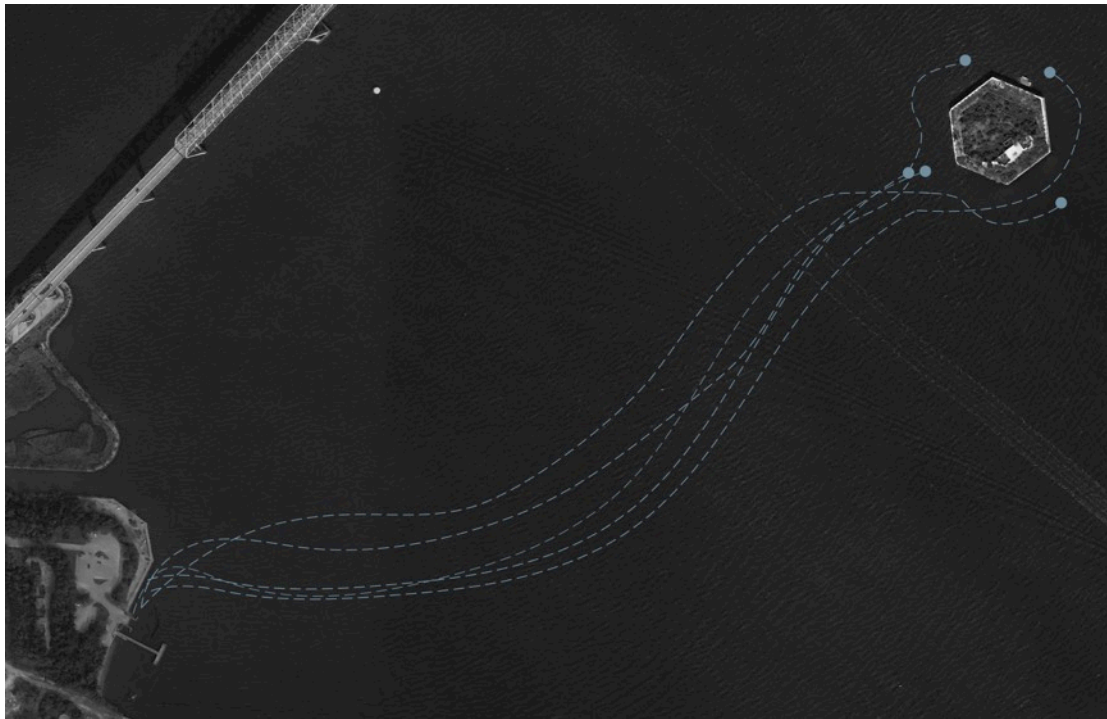


Figure 40 | Kayaker/Boater path from Fort Armistead launch to Fort Carroll (Source: Author)

3 | Systems and Flows

“Sites can be thought of as nodes of interaction: a conceptual shift that places emphasis on the process of exchange and flow rather than the geography of bounded spaces.” -- Kristina Hill ¹⁷

To best determine a program that will re-engage these sites with their contexts, the definition of “site” must be expanded. These sites are detached from the “process[es] of exchanges and flows” that Hill describes and this may be due to their current treatment as bounded, static sites. These sites must be treated as nodes along the path of a diversity of flows passing through them. Once all flows are identified, a program can be determined that will allow the sites to engage with them.

Migratory Paths

A popular fishing area, Fort Armistead park lies along the migration path of several local species. The most common fished species include the Chesapeake Rockfish, the Channel Catfish, and the Blue Crab.

The Chesapeake Rockfish, or Striped Bass, can be found throughout the Chesapeake Bay and its tributaries year round, although some continue to migrate north and south¹⁸. The Rockfish enters the Patapsco River for mating and spawning in the spring and either heads further north in summer or remains in the bay. Some of

¹⁷ Kristina Hill, “Shifting Sites,” in *Site Matters*, ed. Carol J. Burns and Andrea Kahn (New York: Routledge, 2005), 131-156.

¹⁸ “Field Guide: Fish,” Chesapeake Bay Program, last modified 2012, accessed October 15, 2016, <http://www.chesapeakebay.net/fieldguide/categories/category/fish>.

the species remain around the Bay and Fort Armistead's vicinity in the winter while the rest head further south for Virginia and the Carolinas.

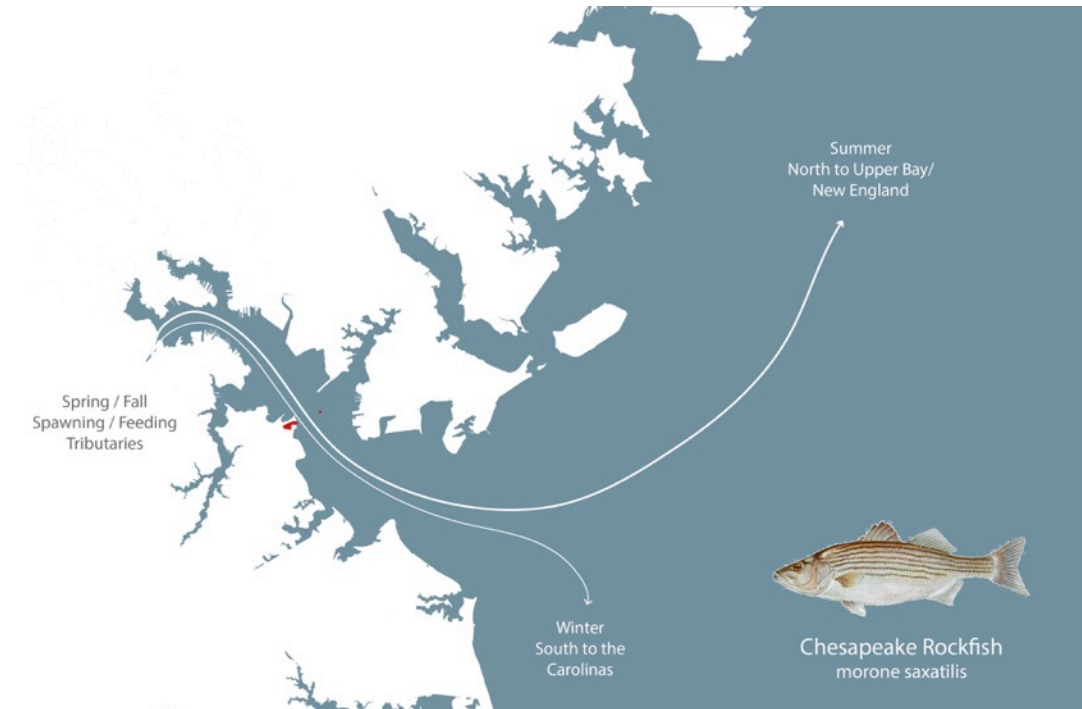


Figure 41 | Chanel Catfish migratory path (Source: Author)

The Channel Catfish dwell along the floor of the Chesapeake and its tributaries¹⁹. Catfish mate and spawn in freshwater tributaries such as the Patapsco and then move towards estuarine waters in the winter and fall. These estuarine waters are found where a freshwater source like the Patapsco meets the Bay and all throughout the Chesapeake.

¹⁹ Chesapeake Bay Program, "Field Guide: Fish."

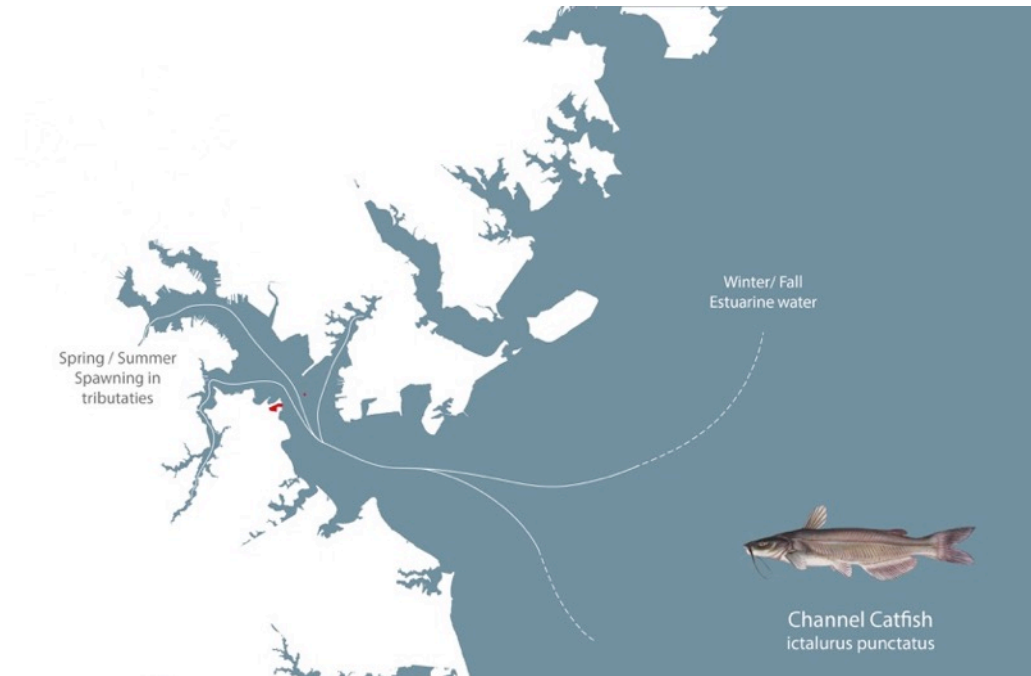


Figure 42 | Chanel Catfish migratory path (Source: Author)

The Blue Crab is the most well known species to come from the Chesapeake Region. It is most often fished for in the spring to fall seasons before they migrate to the floor of the bay for hibernation in winter²⁰.



Figure 43 | Blue Crab migratory path (Source: Author)

²⁰ Chesapeake Bay Program, “Field Guide: Fish.”

Maritime Circulation

Boating is deeply rooted in the culture of Baltimore and the Chesapeake Bay. There is heavy commercial shipping in the Outer Harbor of Baltimore but also a large population of private, recreational boaters. The Fort McHenry Shipping Channel passes directly between Forts Armistead and Carroll. It is the major route used by large commercial ships and private crafts leaving towards the Chesapeake Bay. It leads from the edge of the Inner Harbor out the length of the Patapsco where it meets the Bay at a depth of 50 feet and a width of 700 feet²¹. There is opportunity for the forts to reach out and react to these major flows of private boat circulation through the sites.



Figure 44 | Private craft docks and circulation (Source: Author)

²¹ U.S. Army Corps of Engineers Baltimore District, "Baltimore Harbor and Channels, MD & VA," *U.S. Army Corps of Engineers*, July 2015.



Figure 45 | Commercial craft docks and circulation (Source: Author)

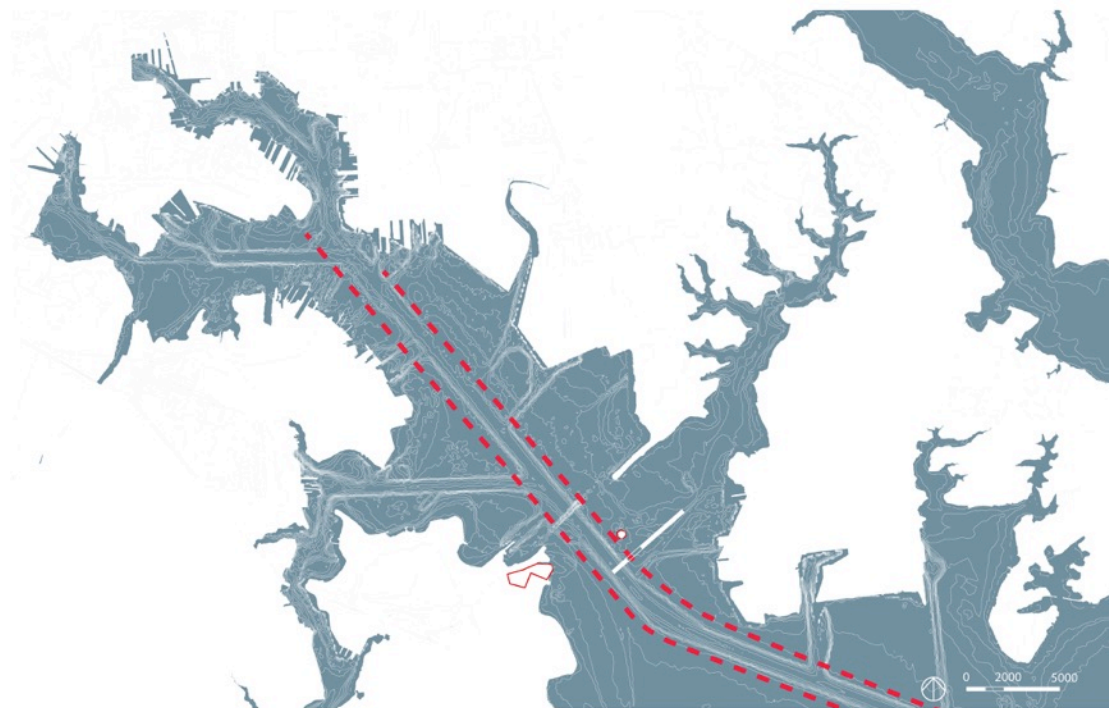


Figure 46 | Fort McHenry shipping channel (Source: Author)

Contaminated Environments

According to the Maryland Department of the Environment, there are several contaminants present in the waters of the Patapsco River. Along the course of the river, runoff from developed areas and industrial plants drops heavy metals including copper, lead, chromium, and zinc into the water²². Highlighted in grey in Figure 37 below are all of the Oil contaminated sites as identified by the Maryland Department of the Environment²³. The contaminated runoff from these sites also impacts the water around the forts as it passes through on its way into the Chesapeake Bay.



Figure 47 | Determined oil contaminated sites (Source: Illustration by Author, adapted from Maryland Department of the Environment)

²² “Patapsco/Back River Watershed SWMM Model Report,” last modified 2007, accessed December 2, 2016, <http://mde.maryland.gov/programs/Water/TMDL/TMDLHome/Documents/www.mde.state.md.us/assets/document/TMDL/bhsag/meet5a/SWMM%20Model%20Report%20Final.pdf>

²³ “Land Restoration Program-Project Site Mapping,” last modified October 6, 2016, accessed October 20, 2016, http://www.mde.state.md.us/programs/Land/MarylandBrownfieldVCP/mapping/Pages/programs/landprograms/err_p_brownfields/mapping/index.aspx.

Cultural Trails and Adjacencies

As seen in Figures 39 and 40, The sites are located only 4.5 miles from Fort McHenry and 7 miles from the heart of downtown Baltimore, giving them a greater potential to connect with these adjacent attractions. Being located close to Fort McHenry provides opportunity for a connective path or relationship to be established between the three historic sites.

These sites are also located along the path of two National Historic Heritage Trails, the John Smith Trail and the Star Spangled Banner Trail. These are two of only nineteen nationally recognized paths established by the National Park Service. The John Smith trail consists of 2,500 miles of boat and land routes that traverse through the Chesapeake Bay watershed down to Virginia, following English explorer, Captain John Smith's original exploratory path through the Chesapeake in the early 1600's²⁴. The Star Spangled Banner Trail is 560 miles long and connects to historic sites in Maryland, Washington DC, and Virginia²⁵. Both trails pass through several protected wildlife areas and historic points of interest along its path, acting as nodes along its course. Forts Armistead and Carroll have the potential to act as one of these nodes along its path, engaging in a larger system.

²⁴ "Captain John Smith Trail," National Park Service, Accessed October 15, 2016, <https://www.nps.gov/cajo/planyourvisit/maps.htm>.

²⁵ "The Star Spangled Banner National Historic Trail," National Park Service, accessed October 15, 2016, <http://starspangledtrail.net/about-the-trail/>



Figure 48 | National Park Service Heritage Trails (Source: Author)

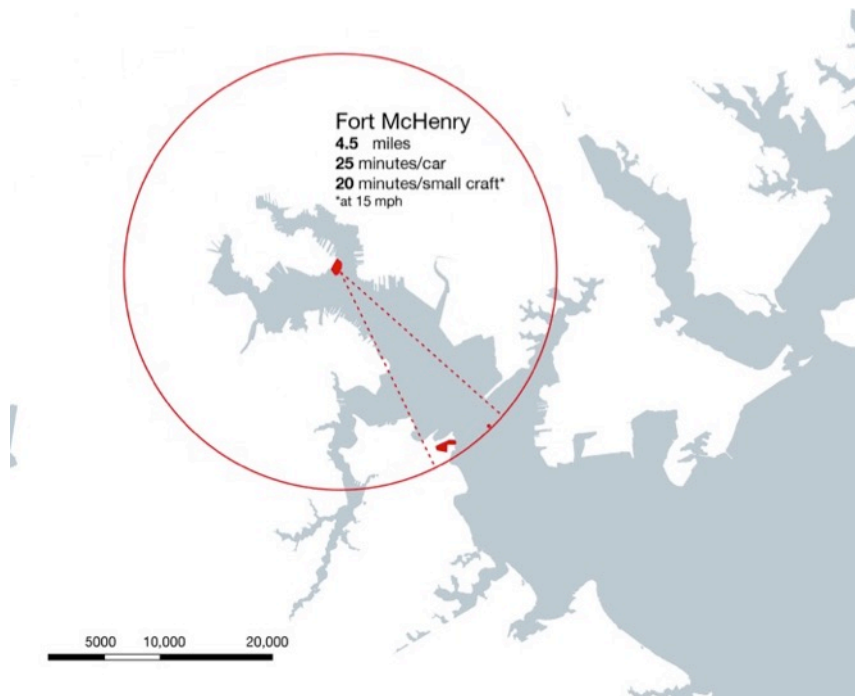


Figure 49 | Adjacency of site to Fort McHenry (Source: Author)



Figure 50 | Adjacency of site to downtown Baltimore (Source: Author)

4 | Program

There are several layers of activity occurring around these sites, including a variety of users and natural flows. However, this activity occurs *around* the sites with no engagement with the forts themselves. This creates a condition where the presence of these structures remains a background element to the dynamic activities that occur around them. In order to revive their presence in the public eye, the forts must react to their contexts and become active agents within the system around them. There must also be consideration of how to present the historic context of these forts to the public to preserve their sense of place in time and context. The overall program aims to be reflective of the exchange between past and present and between

external and internal flows. Analysis of the major, relevant users and natural forces around these sites will lead the investigation into appropriate and effective site program.

Maritime Culture

User | The Fisher

Currently, the recreational fishers on site drive their cars down slope from the main parking lot at Fort Armistead Park to the low sea wall. With their cars full of supplies within reach, the fishers stand or sit in chairs/on the tailgate of their cars with fishing poles in hand, waiting for the first catch of the day.

The fishing culture at Fort Armistead presents a major context that must be reacted to. It is also representative of a long-standing culture and tradition of marine based activities and trade that are essential to the greater culture of the Baltimore area. To best react to this culture, the site can provide better accommodations to their major user group.

Program | Fishing Shelter + Community

Program elements would include areas of shelter and seating for the fishermen, as well as facilities for cleaning of the fish and equipment. These areas would contain seating and a work surface to prepare equipment.

To promote a sense of community and shared culture, the shelters can be arranged around a communal facilities area. Part of the sea wall will be preserved in order to maintain the same communal fishing area as had been before, a testament to this user group and their past interactions on the site.

Environmental Forces

Flooding and Contaminated Waters

In the event of a flood, the fishing area and perimeter edge of the site become submerged and the higher parking level begins to become encroached upon. The majority of the current activity on site (fishing and boating) occurs in this flooding zone so there must be resilient design strategies applied to the site so it can better react to these forces.

This site is also highly vulnerable to the toxic flows entering it. Urban and industrial run off from contaminated sites surround the Forts poses a large risk to the safety of the water quality and the quality of fished species on site. A reaction to this context includes means of filtration that can help protect the site and its resources.

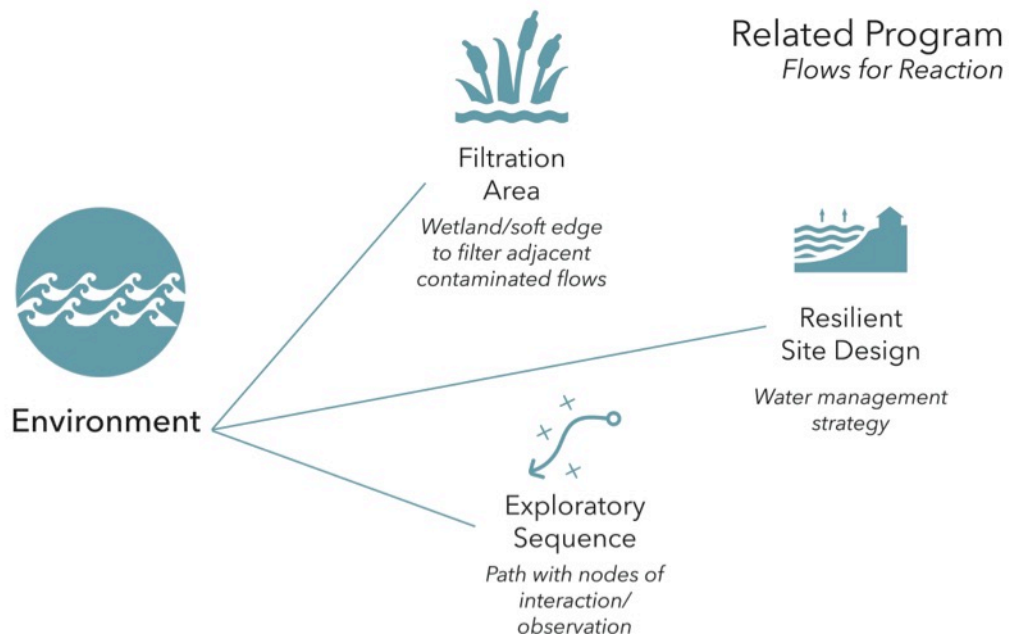


Figure 51 | Environmental Program Pieces (Source: Author)

Strategic landscape design and raised docks will help to keep the site adaptive to changes in sea level due to flooding and also adaptive in the future as sea levels become more unpredictable. By sculpting the landscape to feature areas of high ground and areas of low ground that are able to flood, the site can be more reactive and accommodating to these forces. The site can feature a more permeable edge that works with flooding, rather than preserving the hard, walled edge of the site now that attempts to create a static and barrier.

Wetlands can be developed in these sculpted floodable areas to provide filtration on site. Floating wetland beds are already being used around Baltimore's Inner Harbor as a means of filtration and environmental education²⁶. At the site, wetlands will be integrated into the landscape strategy to filter and also harbor marine ecology. Nutrients from pollutants will be caught in the wetland and consumed by microorganisms that reside there. This will create cleaner and sheltered habitat for a variety of marine life. Overall, this system will not only provide areas for filtration but also areas to educate the public on the processes of wetlands and their greater role for the Patapsco River/Chesapeake Bay.

²⁶ "The Floating Wetlands," Waterfront Partnership, last modified 2016, accessed December 12, 2016, <http://baltimorewaterfront.com/healthy-harbor/floating-wetlands/>.

Exploration

User | The Explorers

Boating culture forms another major user theme at this site. The boat launch at Fort Armistead is heavily used by motor powered crafts and manual crafts for fishing and recreational purposes. Recreational boaters cast off from Fort Armistead Park and head out to explore the open waters of the lower Patapsco River/Chesapeake Bay. There is also the desire to explore Fort Carroll and many recreational boaters and urban explorers head directly across the river from Fort Armistead Park to meander around the abandoned Fort.

Moving from the upper Patapsco, past Fort McHenry, and south towards the Chesapeake is the John Smith Heritage Trail and the Star Spangled Heritage Trail. Boaters follow along an exploratory path throughout the Chesapeake Bay starting from the Patapsco River. These paths pass right through the area of river between Forts Armistead and Carroll.

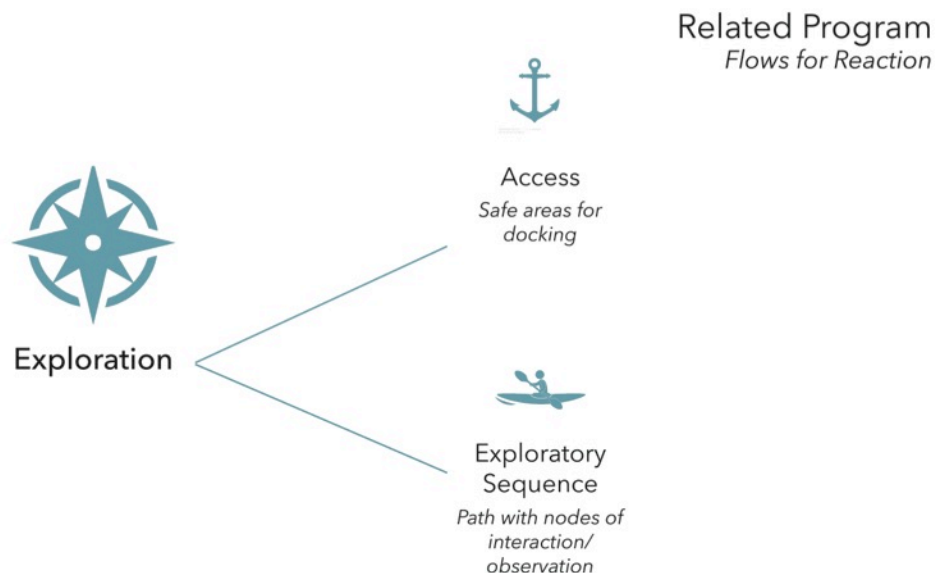


Figure 52 | Exploration program pieces (Source: Author)

The sites can react to these explorers by creating nodes that provide opportunity for further exploration and education. Explorers who access the Fort Armistead site from land can enter first into a visitor's center that teaches them about the historic context of the forts. This visitor's center can also provide information on the history of the Chesapeake Bay and the culture of the people and habitats that have grown around it. Its facilities will include exhibit space, educational classrooms, boat rental facilities, and rest areas that will also include wash areas and showers for kayakers to clean off in. The nearby Fort McHenry boasts a robust visitor's center comprising 17,500 square feet to accommodate 600,000 visitors annually²⁷. This proposed visitor's center anticipates a smaller magnitude of visitors than Fort McHenry, and its area will be between 10,000-12,000 square feet.

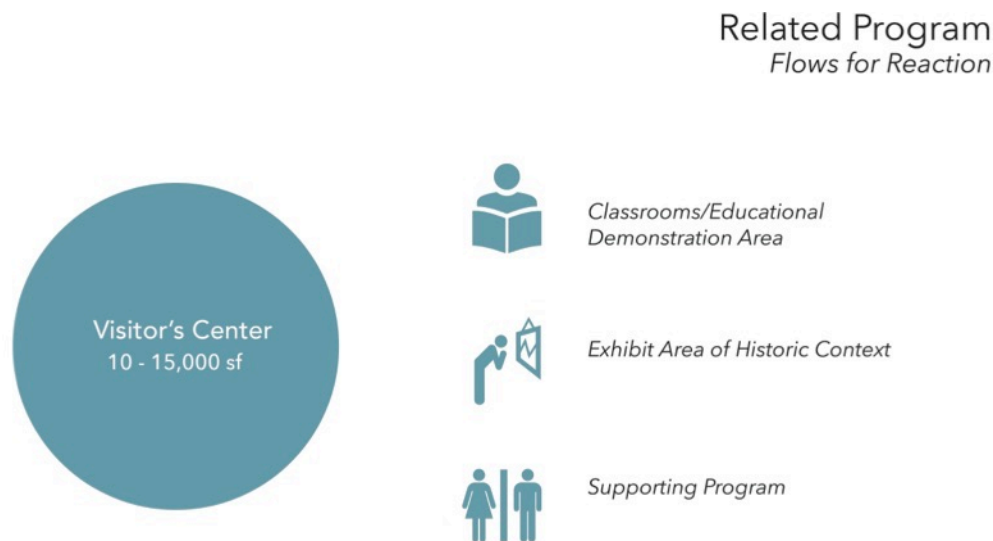


Figure 53 | Visitor Center Program (Source: Author)

²⁷ "Fort McHenry National Monument and Historic Shrine," ArchDaily, last modified August 7, 2011, accessed December 14, 2016, <http://www.archdaily.com/164169/fort-mchenry-national-monument-and-historic-shrine-visitor-and-education-center-gwwo-architects>.

The visitor's center can lead explorers out to a set of paths that lead through the landscape, wetlands, and shoreline, creating an additional exploratory path where users can learn about and interact with these systems. The end of this path can terminate at a system of docks and a boat launch where users can take boats out towards the Bay or Fort Carroll. For boaters entering the site from the heritage trail, they can dock at the edge of the site and pass through the exploratory paths of the wetlands and into the visitor's center.

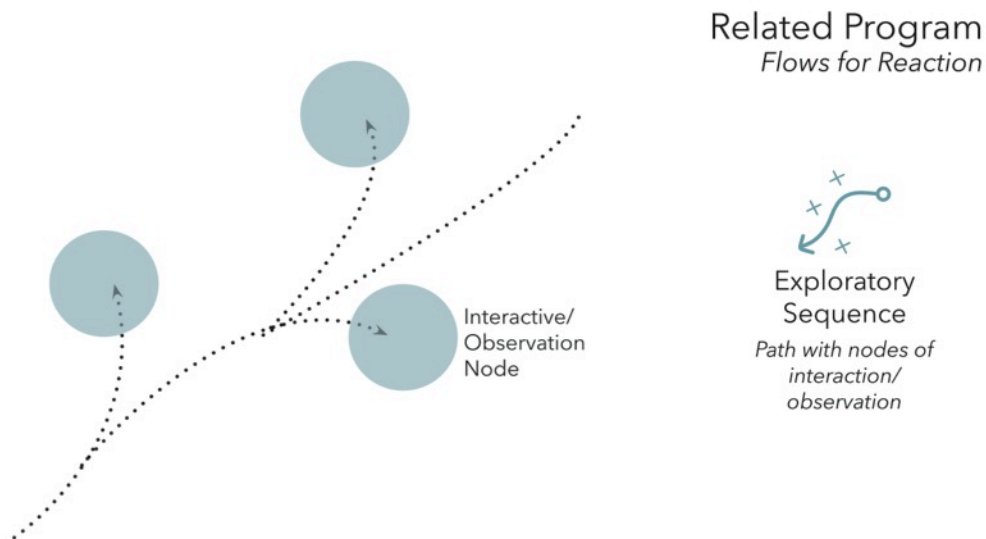


Figure 54 | Diagram of Exploratory Path (Source: Author)

As demonstrated earlier, access onto Fort Carroll is difficult and the lack of safe access deters many from exploring the Fort's interior. To react to this user group, accessible facilities must be added to Fort Carroll. This requires the insertion of docking facilities at Fort Carroll and an accessible entry sequence onto the Fort itself.

Acknowledging the Past | Thematic Sequence

The sequence through Fort Armistead will be reflective of the evolution of its context. The goal of this thesis is to engage these sites back with the exchange of flows between the sites and the larger systems around them. Similarly, the sequence through these sites aims to reflect the concept of the exchange and flow of time. Today, the sites and their historic presence are largely ignored in the system of exchanges and flows, but by re-engaging the history with the current context, users can better understand its past significance and its future.

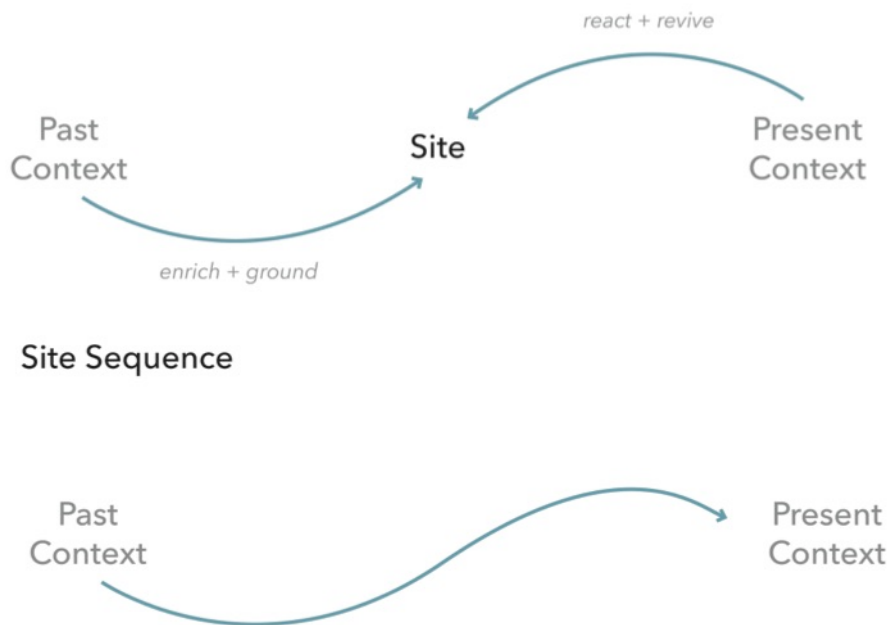


Figure 55 | Interactions of Past and Present (Source: Author)

The sequence will lead from the old context to the new context to give users the best understanding of the site. Users will move from the visitor center up through Fort Armistead, first showing users the historic context of the site and help them to gain an understanding of why these forts came into existence. Users will then pass through the exploratory paths along the newly sculpted and resilient landscape. There

will be areas of interaction and observation where the path meets with the fishing shelters. This path aims to demonstrate the present context and impending environmental factors that impact the Fort. This entire sequence will lead users through a path that is representative of the transformational contexts that this site has undergone.



Figure 56 | Overall Sequence of Past and Present (Source: Author)

This path is mirrored as the users journey towards Fort Carroll. Users will pass through the Patapsco River, with views to the industrialized sites along the waters edge and towards the modern Key Bridge in the distance. Once users enter onto the newly accessible facilities at Fort Carroll, they will engage once again with the historic context as they explore the remnants of the past.



Figure 57 | Conceptual collage of site vision (Source: Author)

5 | Precedents

Each precedent has been chosen in correlation to the major themes presented by the program. The precedents range in size, from the scale of a single user to the scale of an entire site.

Making Shelter | *TYIN Boathouse*

Built on a secluded site in More og Romsdal, Norway, the boathouse is a small, wooden shelter perched on the rocky shoreline of a scenic fjord. It was designed by TYIN studio in 2011 as a redesign of an existing, dilapidated boathouse²⁸. The user approaches the site by descending down sloped terrain leading towards the waterfront. A low concrete retaining wall interrupts the sloped earth creating a carved pavilion, signifying the threshold onto the domain of the boathouse.

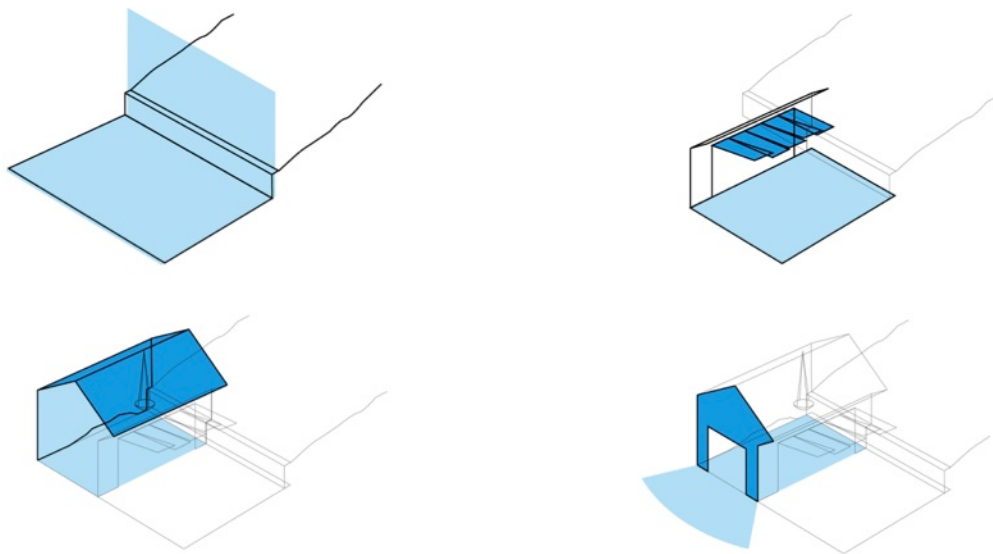


Figure 58 | Space Defining Elements in sequence (Source: Author)

²⁸ “Boathouse,” Arch Daily, last modified September 15, 2011, accessed October 21, 2016. <http://www.archdaily.com/168642/boathouse-tyin-tegnestue>

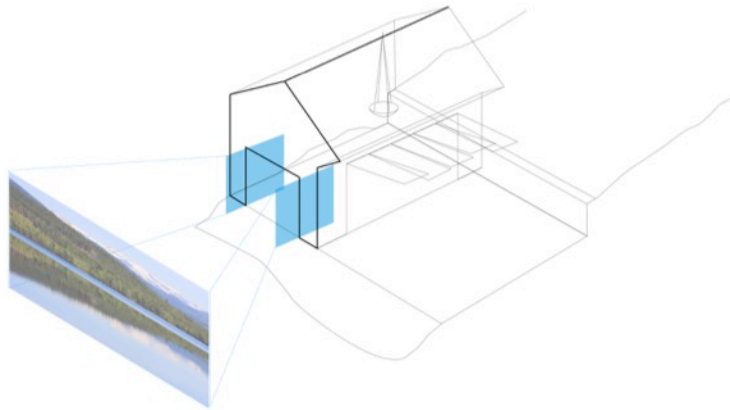


Figure 59 | Creating a view corridor (Source: Author)

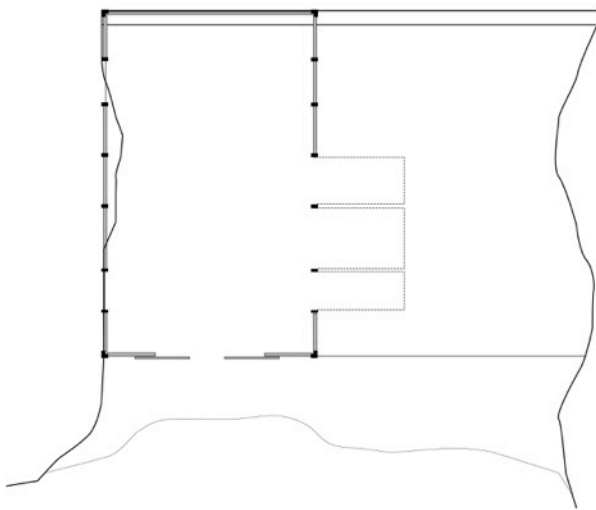
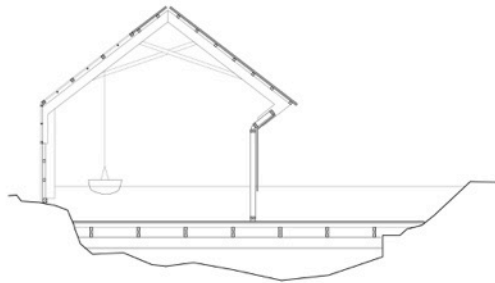


Figure 60 | Plan and Section of Boathouse (Source: Author, adapted from TYIN Studio)

The boathouse was not only salvaged and redesigned physically, it was also redesigned functionally. Traditionally, Norwegian boathouses were used strictly for storage but the architects designed the new boathouse to accommodate recreational use and gathering as well²⁹. The boathouse encloses only 2000 square feet, but is flexible in its spatial definition to allow for expanded use beyond boat storage. Shuttered panels on the east wall flip upwards, expanding the sense of enclosure to include the outdoor pavilion. A large sliding door on the south side opens the boathouse to views of the fjord, also increasing its sense of spatial depth. A small hearth and areas for seating along the north wall provide amenity for gathering and comfort. With such new interventions, the architect is careful to remind the users of a sense of place: the walls of the boathouse are carved around abutting stones, allowing parts of the landscape to flow into the space.

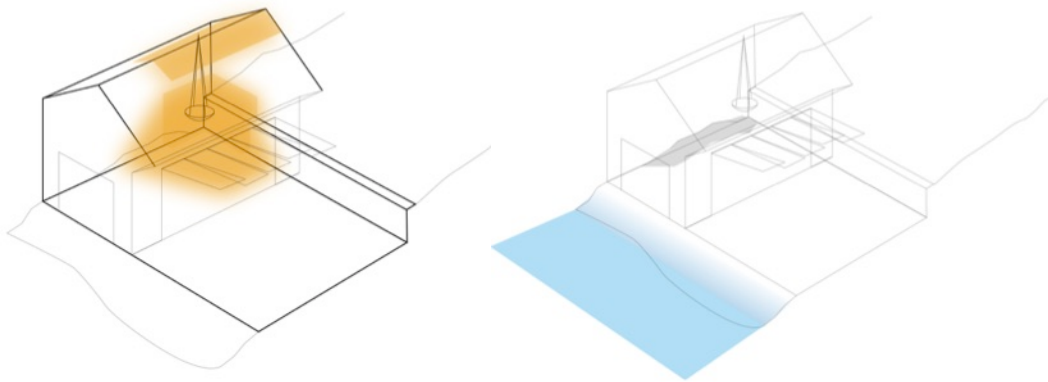


Figure 61 | A study of warmth and soft edges (Source: Author)

This precedent serves as a study of sheltered space for fishermen and boaters. It will help to influence the design of fishing shelters at Fort Armistead Park.

²⁹ TYIN Tengueste, “Boathouse”

Creating Spaces for Learning and Interaction | Augmented Tides

A conceptual student project by Rafael Berges and Jared Clifton, Augmented Tides is a research and outreach center in the Bay of Oakland, California. It consists of three major platform levels stepped down towards the tidal basin. The upper two platforms contain classrooms and labs with an exterior hallway looking down onto the platform below. The lowest is a dock platform that contains a boat launch area and tidal classroom, a platform that is floodable with the tides so that students can enter the water and interact with tidal species.

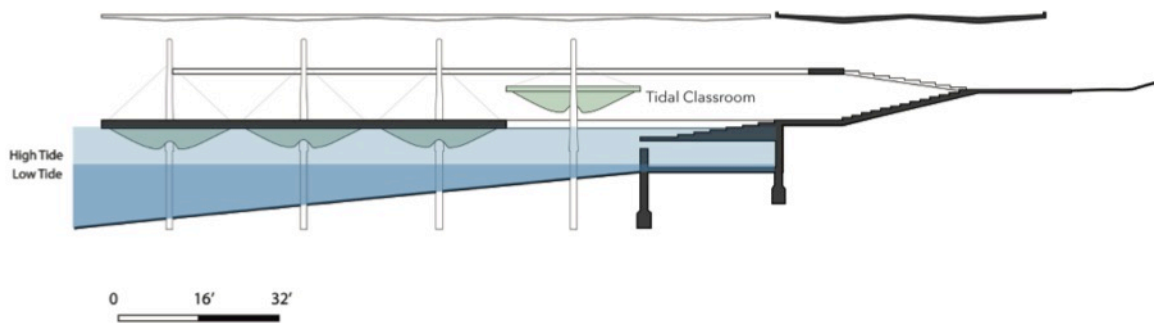


Figure 62 | Section of Augmented Tides (Source: illustration by Author, adapted from Berges and Clifton)

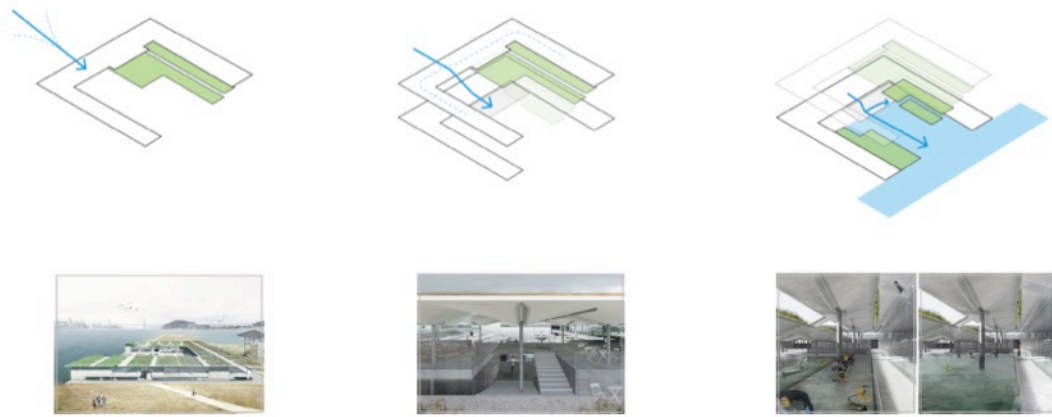


Figure 63 | Sequence through Augmented Tides (Source: diagrams by Author, perspectives by Berges and Clifton)

Augmented Tides was designed to work as a living filtration system³⁰. Along with the three programmatic platform levels, there are corresponding levels of marsh beds that step down towards the bay. Lower marsh beds at the water level fill up with the tide, filter the water, and send out clean water as the tide dissipates. Upper marsh beds receive tidal water through a plenum. The incoming tides pushes water up the plenum to be filtered and then sent back once the tide goes out again³¹. These beds are also accessible to visitors and researchers for observation and interactive learning.

This project serves as a precedent to the exploratory paths that will traverse through the site. The interactive nature of the marsh beds and tidal classroom at Augmented Tides will serve as an influence to the interactive/educational nodes along the paths.

³⁰ “Augmented Tides.” Association of Collegiate Schools of Architecture, last modified 2016, accessed October 25, 2016, <http://www.acsa-arch.org/programs-events/competitions/competition-archives/2015-2016-cote-top-ten-for-students/2015-2016-cote-top-ten-for-students-winners/augmented-tides>

³¹ Berges, Rafael and Clifton, Jared, “Augmented Tides.”

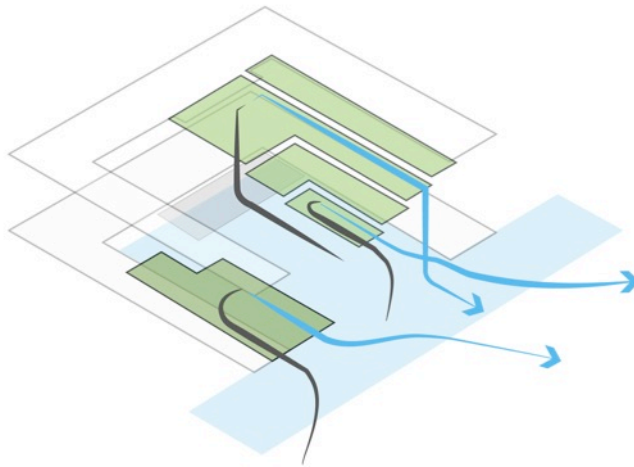


Figure 64 | Study of water filtering path (Source: Author)

Acknowledging Historic Contexts | Waterline Museum

Fort Vechten is a 200-year old fortification located in Utrecht, Netherlands. It is an earthen fort comprised of large ramparts that act as retaining walls, holding back an artificial earth mound with program concealed underneath of it. The program (barracks, ammunition storage etc) is connected by a series of tunnels that circulates beneath the ground and leads to above ground program within the fort walls. In designing a museum for the site, Dutch architect Anne Holtrop used a subterranean design approach to strategically insert new program that fit within the context of the fort³². Like the existing program of the fort, the 20,000 square foot museum is concealed below the earthen mound of the fort, invisible to users looking at the fort from outside³³. The museum is a series of below ground spaces located around an

³² “National Museum for the New Dutch Waterline,” Designboom Architecture, last modified April 21, 2012, accessed December 9, 2016 <http://www.designboom.com/architecture/studio-anne-holtrop-nationalmuseum-for-the-new-dutch-waterline/>

³³ Studio Anne Holtrop, “National Museum for the New Dutch Waterline.”

open air, sunken courtyard. The form of the courtyard was derived from the lines of the existing topography. This undulating form fits snugly into the landscape, demonstrating an understated design insertion that respects the historic presence of the fort.

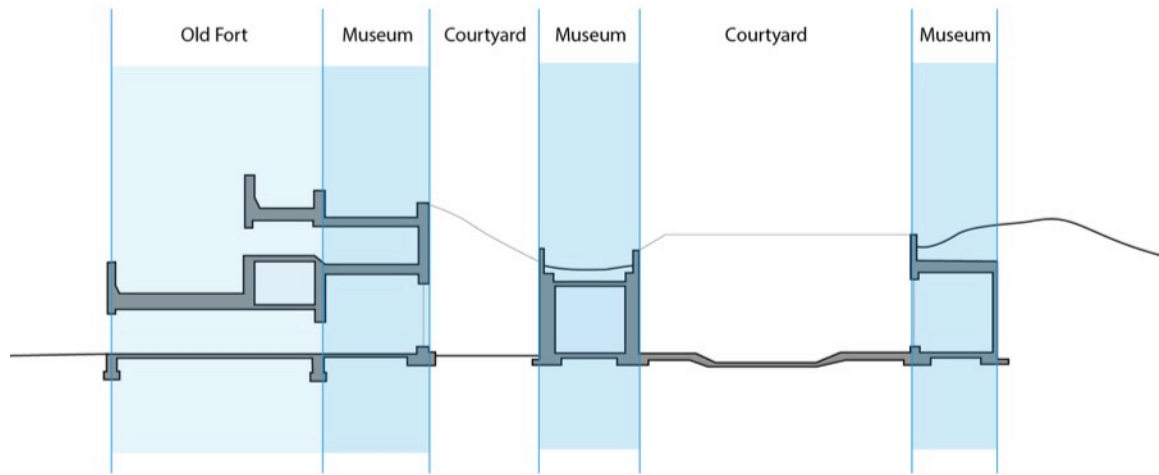


Figure 65 | Sectional Sequence (Source: Author)

Holtrop's insertion of the Waterline Museum into the sequence of circulation at the site creates transitions between the old and new. Visitors enter into the preserved fort barracks located within the rampart retaining wall at the front of the fort. The entry to the museum was carved out of the back wall of the barracks. The user passes through the historic wall of the fort moving deeper into the mound and over the threshold of the new museum. Here, they are greeted by light coming through the windows looking into the sunken courtyard. Users circulate around the museum and through the courtyards and then ascend onto the top of the earthen

mound by way of a courtyard stair. Once above the museum, users are free to explore the rest of the historic site.

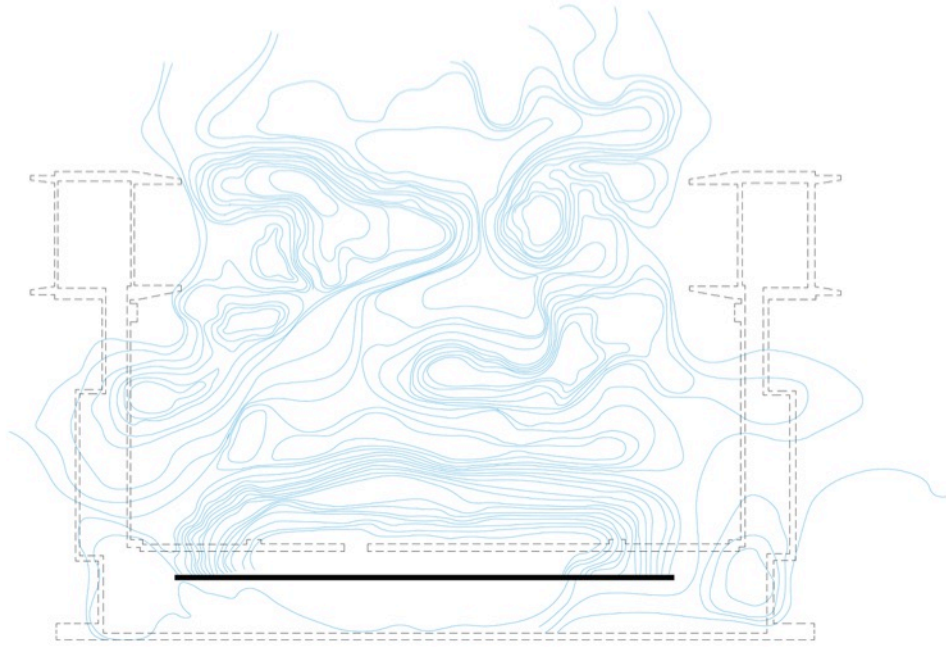


Figure 66 | Pre-existing topography (Source: Author, adapted from Anne Holtrop Studio)

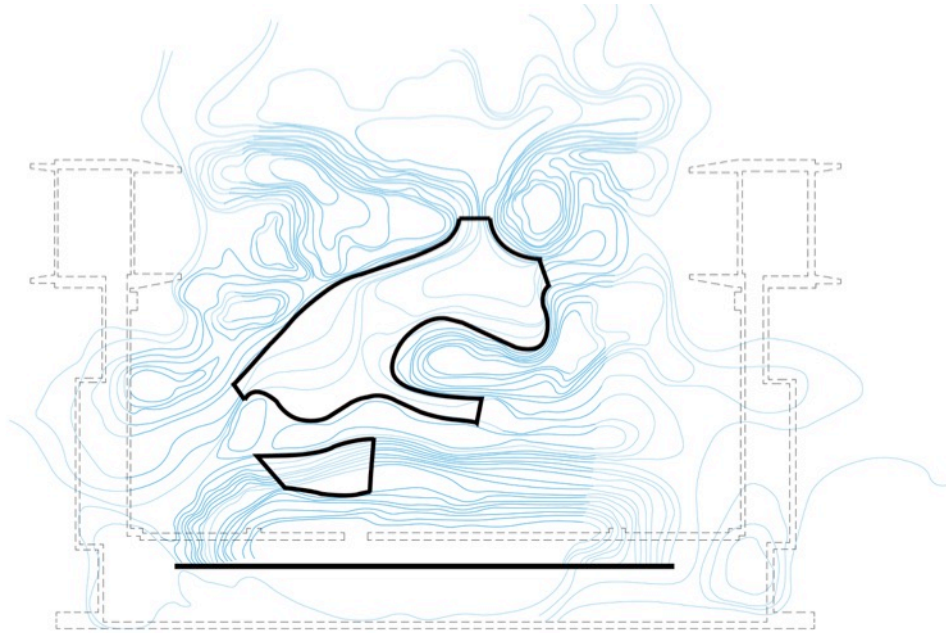


Figure 67 | Intervention as extension of topography (Source: Author, adapted from Anne Holtrop Studio)

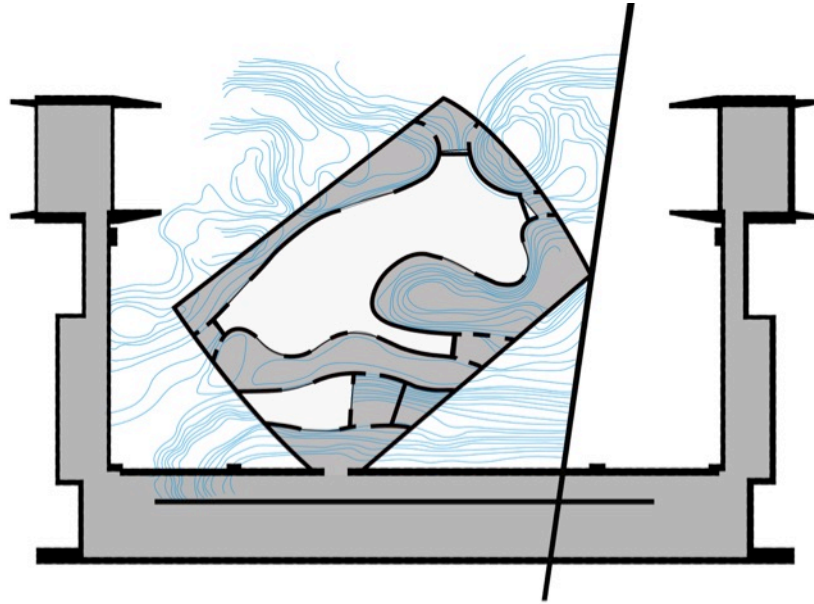


Figure 68 | Plan of Intervention in topography (Source: Author, adapted from Anne Holtrop Studio)

This project was studied to understand how to insert a new design intervention onto a historic site. The passive, seamless insertion of the Waterline Museum into the vernacular of Fort Vechten will help drive the design of Fort Armistead’s visitor center. The connection between old and new structures and the passage between both contexts is a goal that this precedent and the visitor center at Fort Armistead share.

Designing for Resiliency | Fingers of High Ground, Norfolk VA

Norfolk is a low lying, waterfront community located in Virginia’s tidewater region. It is located at the meeting of the lower Chesapeake Bay and the James and Elizabeth Rivers, a convergence of three major bodies of water³⁴. Sea level rise has become an extreme problem affecting residents of the city and surrounding areas, and even in heavy rainfall the city experiences flooding due to the combination of high

³⁴ “Norfolk, Virginia,” Structures of Coastal Resiliency, last modified 2016, Accessed October 20, 2016

<http://structuresofcoastalresilience.org/locations/norfolk-va/>

tide and inland creeks and rivers that fill beyond capacity. This study done by the Structures of Coastal Resilience (SCR), a Rockefeller Foundation initiative, looks into alternative proposals for large-scale landscape design to address these vulnerable communities.

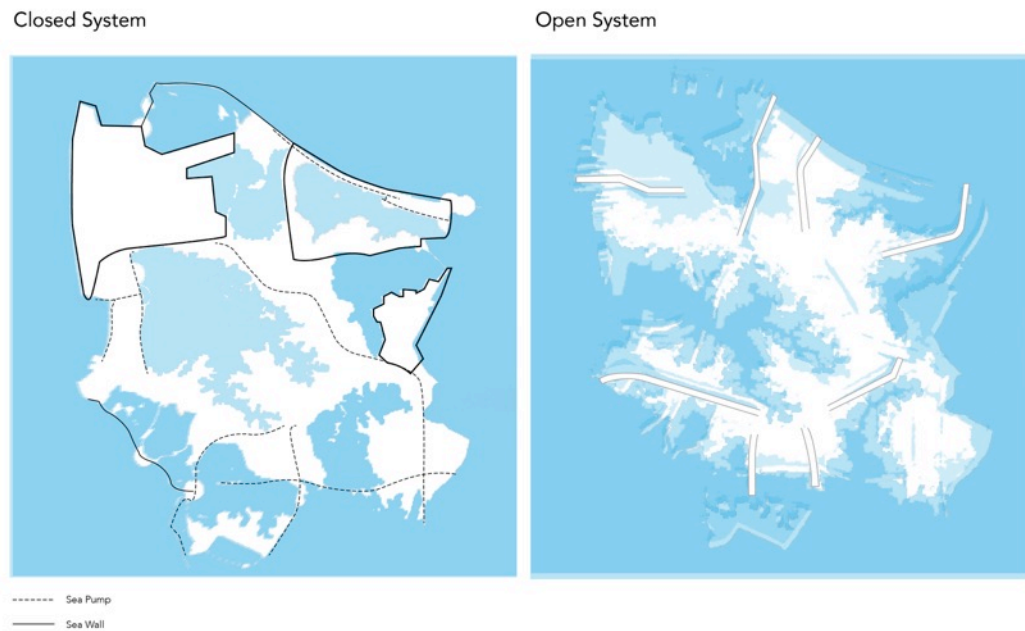


Figure 69 | Closed and Open Systems (Source: illustration by Author, adapted from Structures of Coastal Resiliency)

Currently, the city of Norfolk is looking into creating a system of barricade like sea walls and pumps to force the water out of its natural flooding path away from developed area³⁵. SCR classifies this type of strategy as a “Closed System,” where a barrier is created as a temporary solution to combat sea level change. Rather than create barriers against rising waters, SCR aims to use an “Open System” that accommodates sea rise using grade manipulation to create alternating areas of high and low ground at the coastline. This allows both controlled flood area and area that

³⁵ The Rockefeller Foundation, “Norfolk, Virginia.”

is safe for development without creating intensive levee and pump systems that are subject to failure. They create a permeable shoreline that can withstand floods and sustain development.

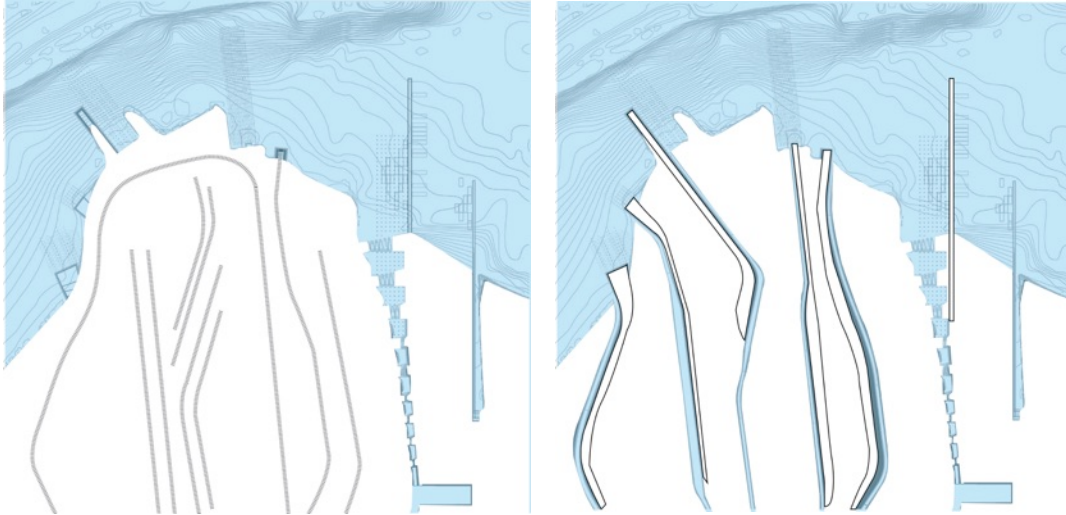


Figure 70 | Existing Rail lines influencing Fingers of High Ground (Source: Author)

The path of these “Fingers of High Ground” is derived from the existing path of rail lines that run from coastline further inland³⁶. Each strip of high ground is paired with a finger of low ground that runs in parallel with it, creating peninsula like areas of high ground. As these linear fingers of high ground reach the shore, the land dissipates to marsh beds and freestanding piers that can anchor tidal ecologies. The areas of low ground are programmed with filtration fields to purify the incoming and outgoing water.

³⁶ ³⁶ The Rockefeller Foundation, “Norfolk, Virginia.”

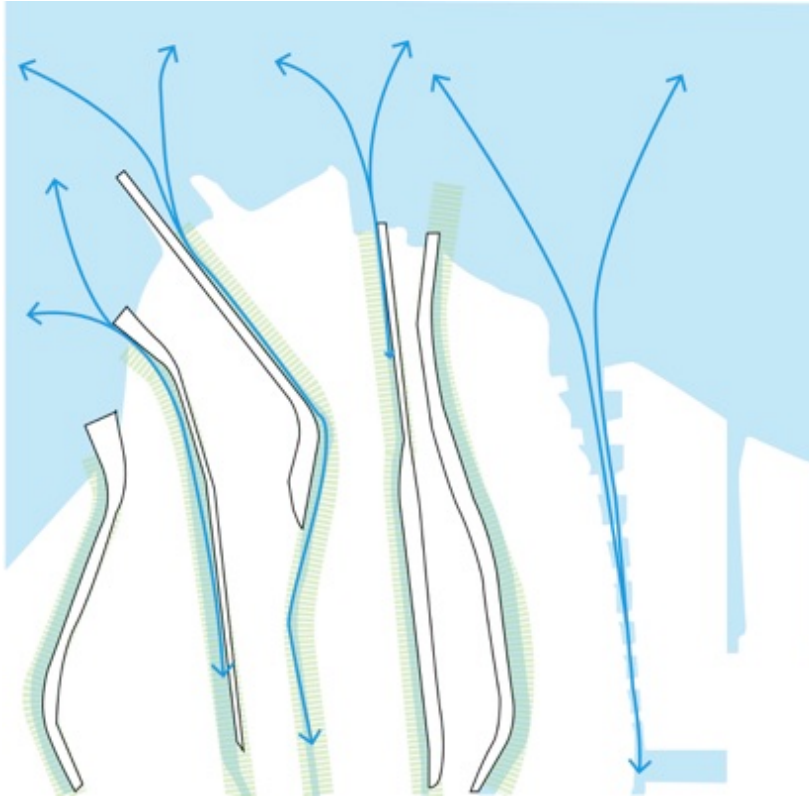


Figure 71 | Water movement through fingers of low ground/filtration beds (Source: Author)

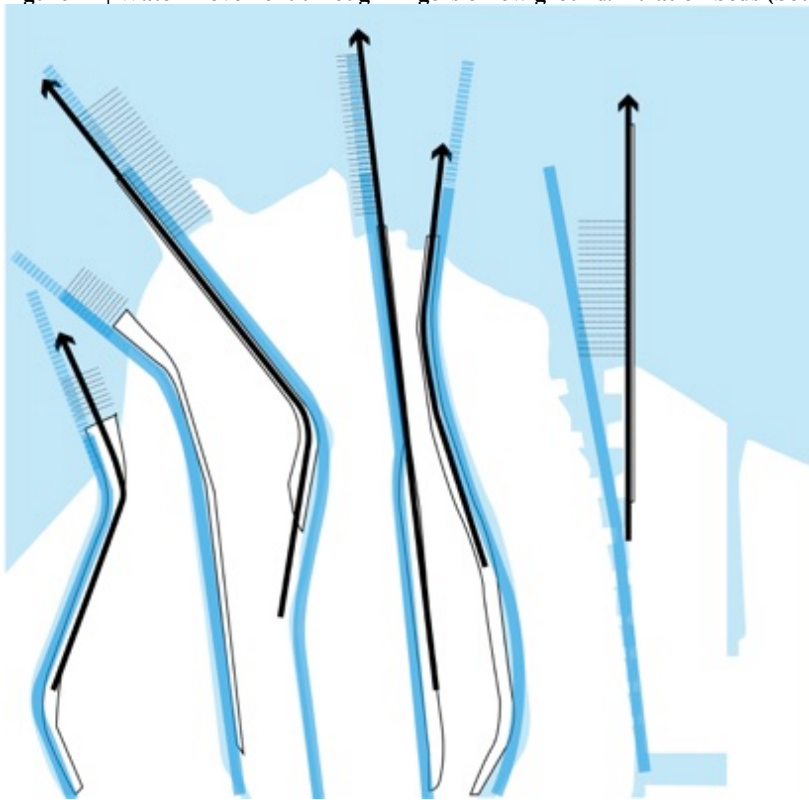


Figure 72 | Parti Diagram (Source: Author)

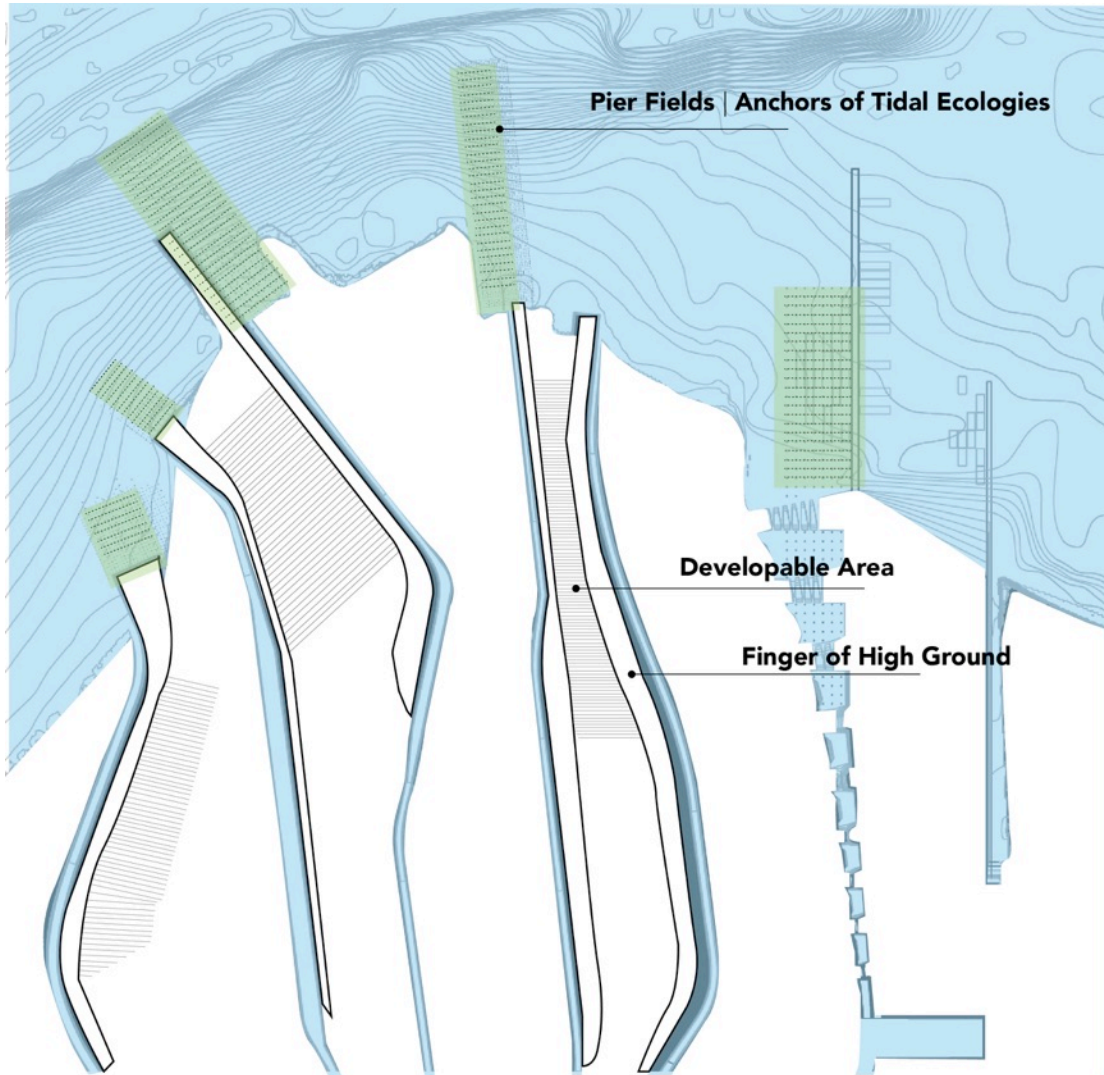


Figure 73 | Plan of Design Intervention in Norfolk, VA (Source: Author)

This study teaches different strategies for designing resilient sites. The concept of the “Fingers of High Ground” helps to create a permeable barrier on the site that can be used in the sculpting of the landscape at Fort Armistead. This thesis site aims to use strategies such as those seen in Norfolk to create an open system that will be adaptive in flooding events and shifting sea levels.

6 | Design Process and Strategy

As a means of tying the forts back into the context around them, cues were taken from the original design intent of the forts themselves to create strategies for the design proposal. First, it was decided that the sequence would bring users to the fort as a means of engaging the public with the fort itself. The axes of the three repetitive gun batteries of Battery McFarland on Fort Armistead would then be used as important regulating lines that would bring people from the fort to the water's edge. Another major cue taken from the site analysis was the importance of the historic sightline from Fort Armistead to Fort Carroll across the river. This sightline becomes the major gesture in the proposal, along which the journey to Carroll begins. All of these regulating lines were used as the axes along which users could be brought from the Fort to the water's edge, the intent being that a specific sequence would be designed along each axis from Fort to river.

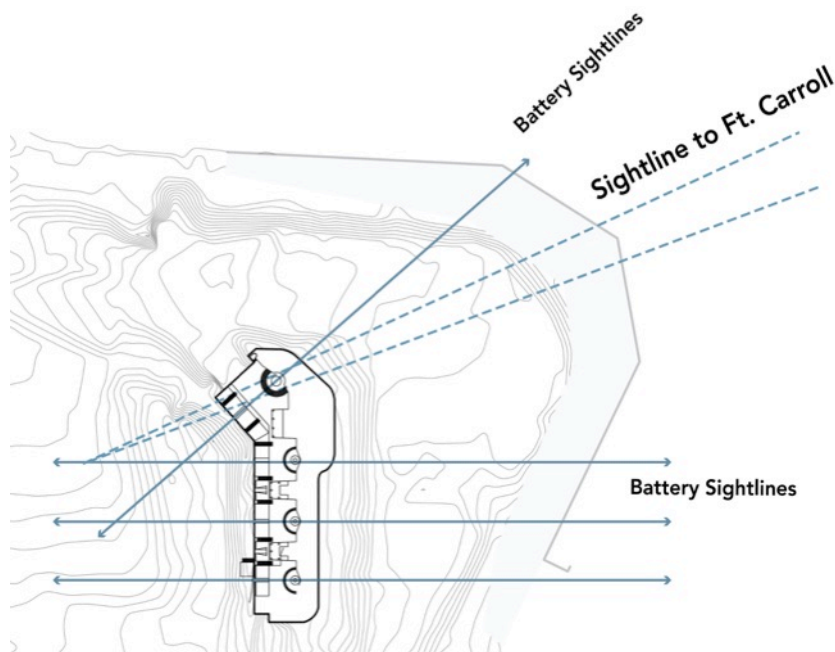


Figure 74 | Diagram of regulating lines as design strategy (Source: Author)

Using these strategies for design, design exploration began with a series of schematic schemes for Fort Armistead, the primary site. The first iterations used more intrusive methods on the site. This included building the visitor's center onto Fort Armistead and stripping back sections of the landscape in accordance with the regulating battery axes as seen in figures.

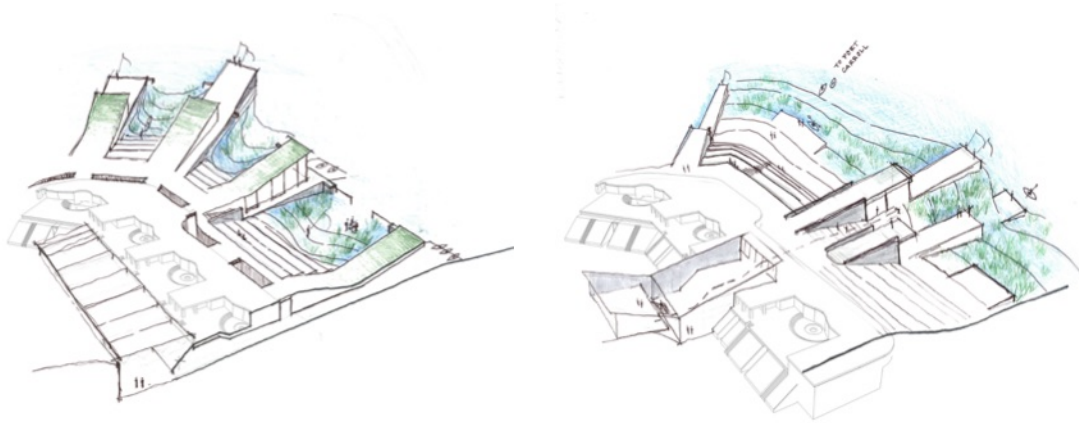


Figure 75 | First schematic iterations in aerial a view (Source: Author)

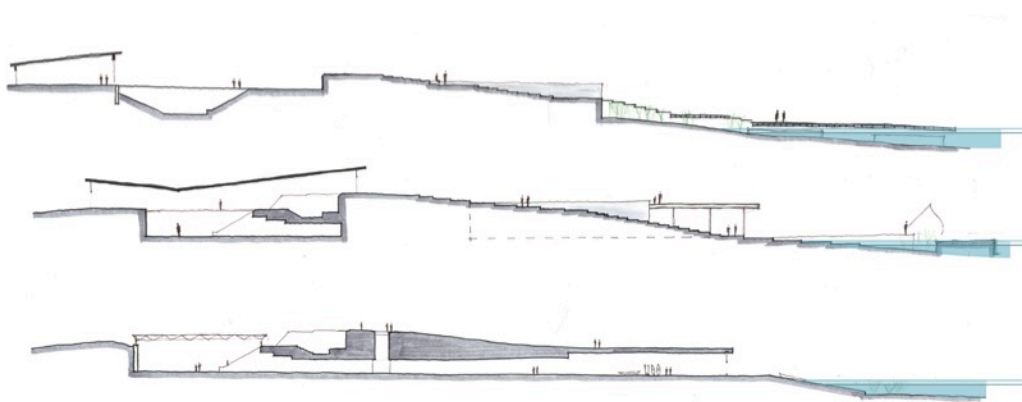


Figure 76 | Schematic spatial sequence in section along battery axes (Source: Author)

A second set of more aggressive schemes was tested in which the landscape was stripped away so that the river's edge came up to the Fort itself as a means of direct engagement of the fort to its surrounding environment.

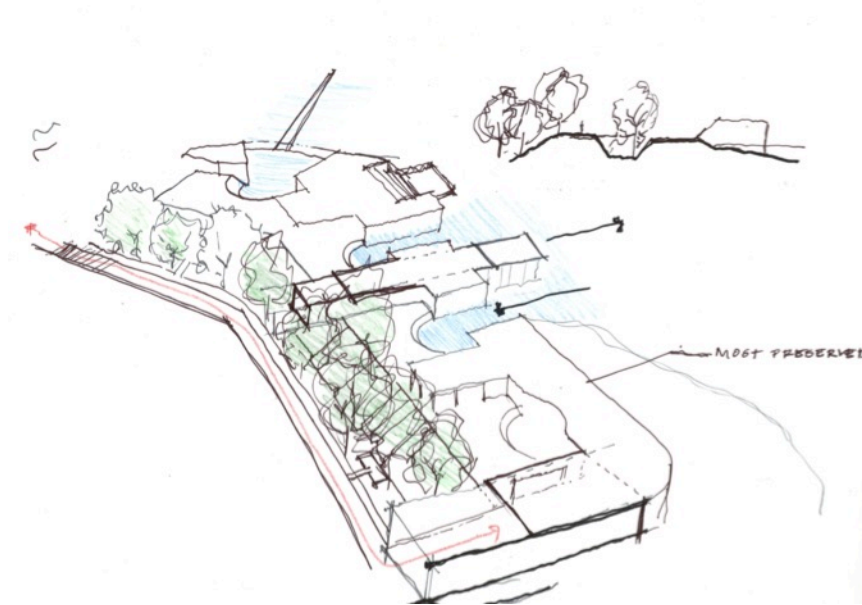


Figure 77 | Schematic design bringing water into the fort (Source: Author)

This set was too intrusive on the landscape. It erased away the layers of cultural landscape on the site such as the berm the fort is built into and the added sea wall. The aim of the thesis is to add to the rich layers of cultural landscape present on the site, not to disrupt the integrity of the forts and the landscape. The next set of schematic exploration looked into more delicate schemes that added a distinctive layer to the site while still maintaining the integrity of the fort and majority of the landscape.

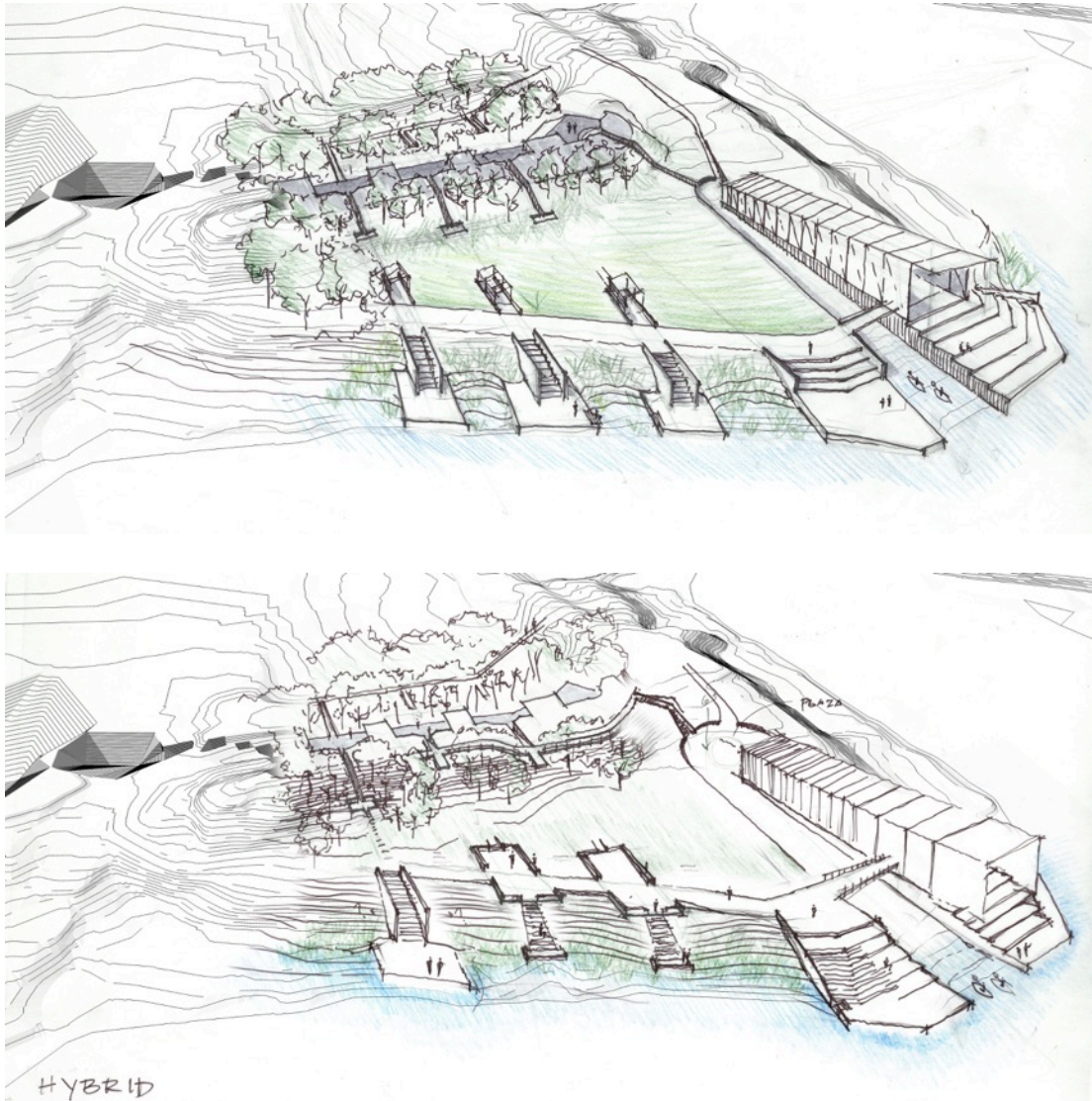


Figure 78 | Schematic schemes from the third design exploration (Source: Author)

The final scheme that was developed aspired to the goal of the final design exploration set. It maintains the integrity of fort and landscape except for key moments where the existing conditions are modified to emphasize a point on the sequential path. Bringing users through the fort first, the major sequences would occur along the sightlines of the batteries, bringing users from the fort, through the landscape, to the water's edge. Moments where the axes meet the edge would be emphasized with a landscape pavilion, each programmed for a different use along the

path. Along the major sightline to Fort Carroll, a visitor's center is built alongside an enlarged boat ramp where users can begin their journey out across the river.

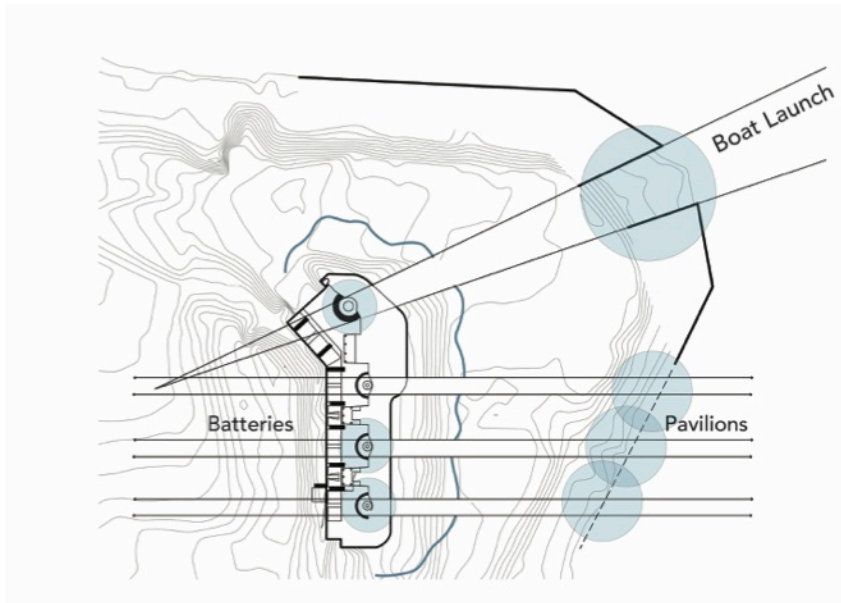


Figure 79 | Parti schematic diagram (Source: Author)

At Fort Carroll, the major design goal is to provide accessibility onto the site, as well as creating a pathway around the site with places of overlook and observance into the ruins of the fort. Each iteration explored means of creating an accessible entry that aligned with the sightline from Fort Armistead. The location of the existing entry, located facing away from Fort Armistead, proved to be a hindrance to the continuity of the journey from Fort Armistead. Studies were done to explore ways of creating an entry on the south west side of the Fort, along the sightline from Fort Armistead.

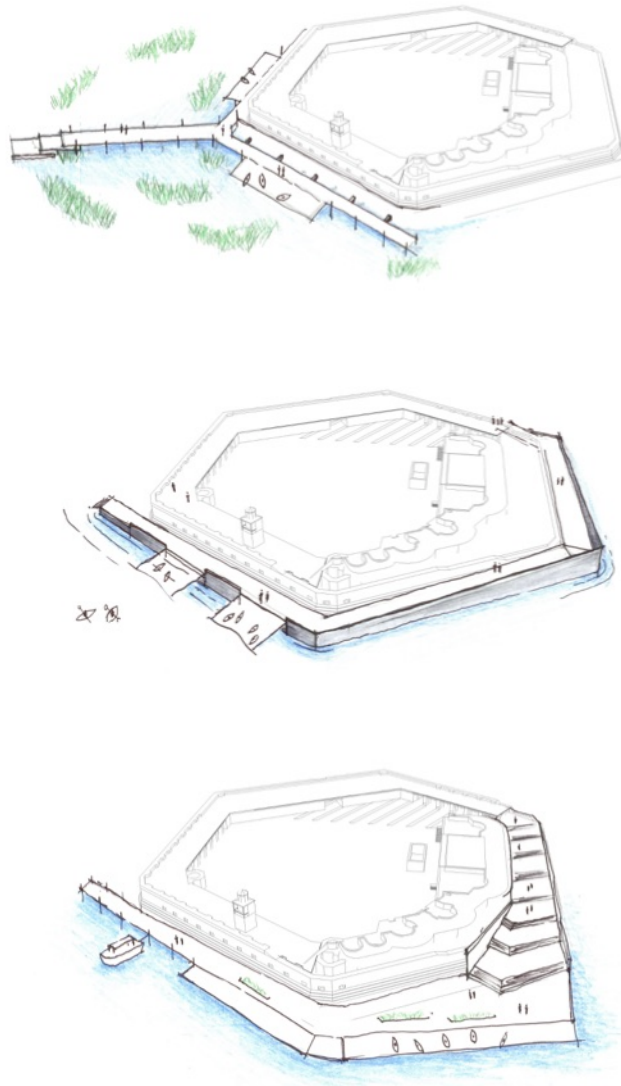


Figure 80 | Early studies of Fort Carroll (Source: Author)

After several studies and explorations, the final scheme worked within the language of the fort's brick cannon arcade to weave a path through the bays of the arcade within the rampart. An entry is sliced into one of the bays of the arcade, facing Fort Armistead, and ramps a pathway up through the arcade to the upper platform, on top of which viewpoints are possible to the remains of the fort below.

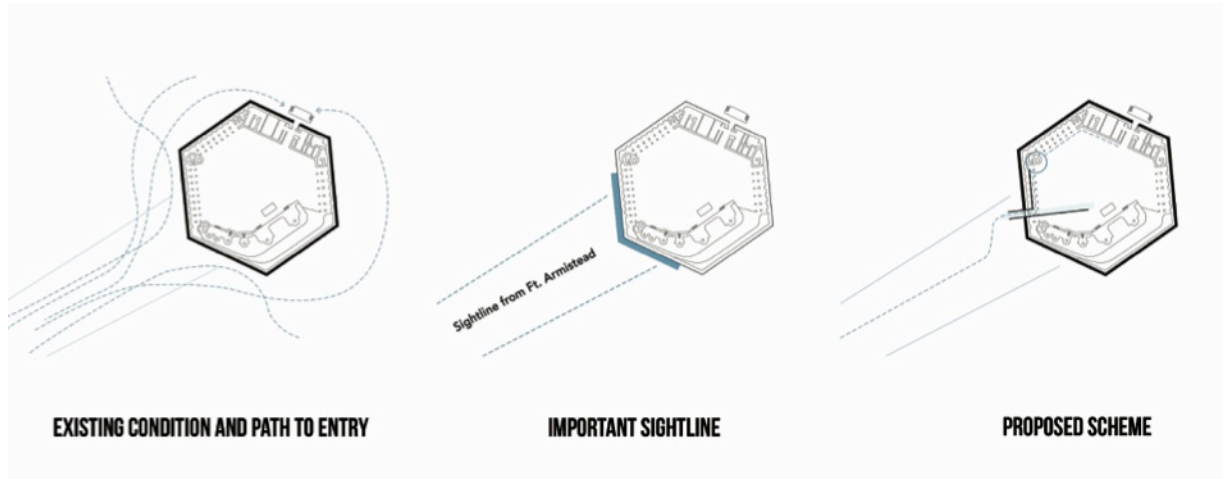


Figure 81 | Diagram of proposed design intervention at Fort Carroll

7 | The Sequence

The following chapter will walk through the final design proposition, the spatial sequence, beginning at Fort Armistead and working its way to Fort Carroll.

Fort Armistead



Figure 82 | Proposed site plan for Fort Armistead (Source: Author)

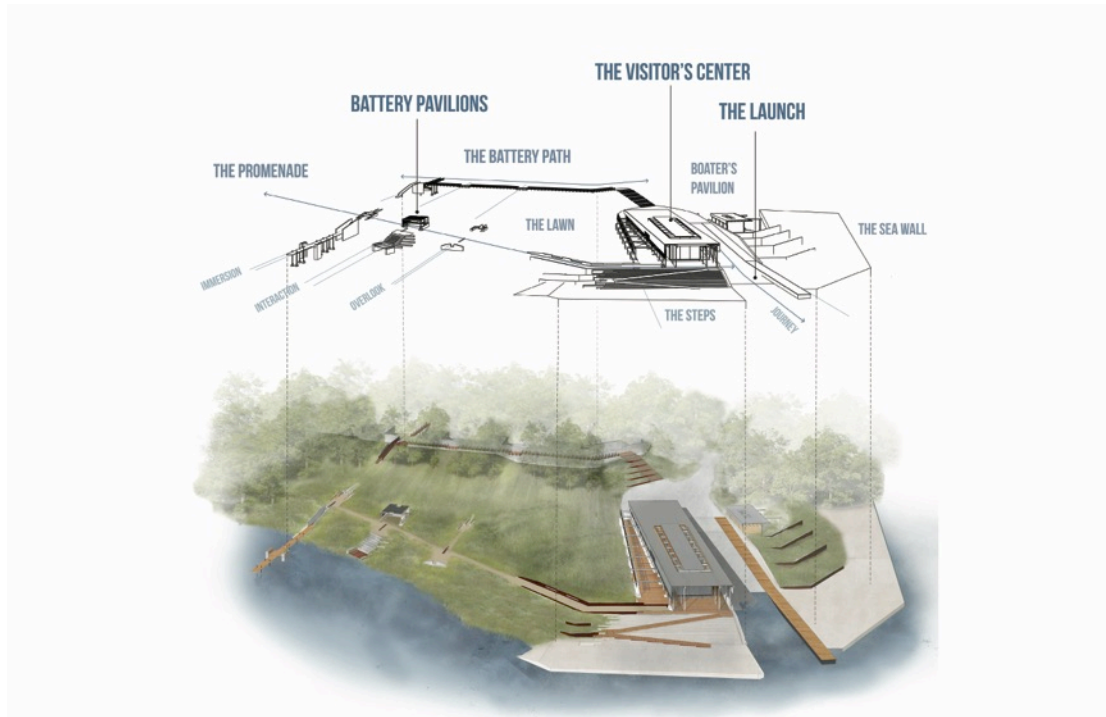


Figure 83 | Overview of new places created at Fort Armistead, viewed in aerial from the water (Source: Author)

Users enter the site from Fort Armistead road as they did before, but have the option to enter into a parking lot located before the road passes by the fort. From here, visitors looking to explore the fort enter onto a wooded path that brings users through a heavily vegetated, hiking path to a release point where the trees clear away and the fort becomes visible.

ENTERING BATTERY MCFARLAND

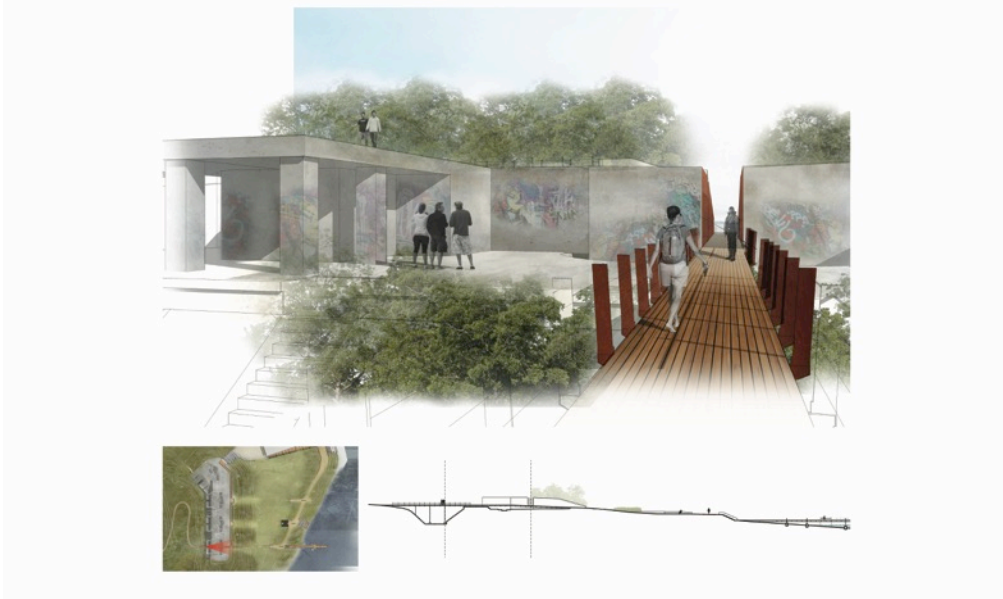


Figure 84 | Approach onto Fort Armistead (Source: Author)

Moving over the depressed topographic area to the east of the fort, users cross a footbridge that is located directly on axis with the center of the first battery. A corten steel and wood walkway traverses throughout the fort, guiding users through the fort. The center of this battery is sliced through, allowing users to continue through to experience the rest of the site. Users may also remain at the fort and walk up a set of stairs to the Battery Path, which walks users along the upper platform of the fort for further exploration. At each battery axis along the upper platform, there is an area for overlook and the trees clear away to provide a direct view line out towards the water and to its corresponding pavilion along the water's edge.

THE BATTERY PATH



Figure 85 | Walking along the Battery Path (Source: Author)

Users who pass through the sliced portion of the battery continue on axis out towards the river. Where the battery axes meet the edge of the landscape is a pavilion, each interacting differently with the edge of the site as it meets water. The three pavilions are strung together by a packed dirt promenade, natural and appropriate to the landscape. The sea wall has been stripped away at this southern portion of the site to create a soft edge of marshlands that act as filtration for the river and also harbor tidal ecosystems.

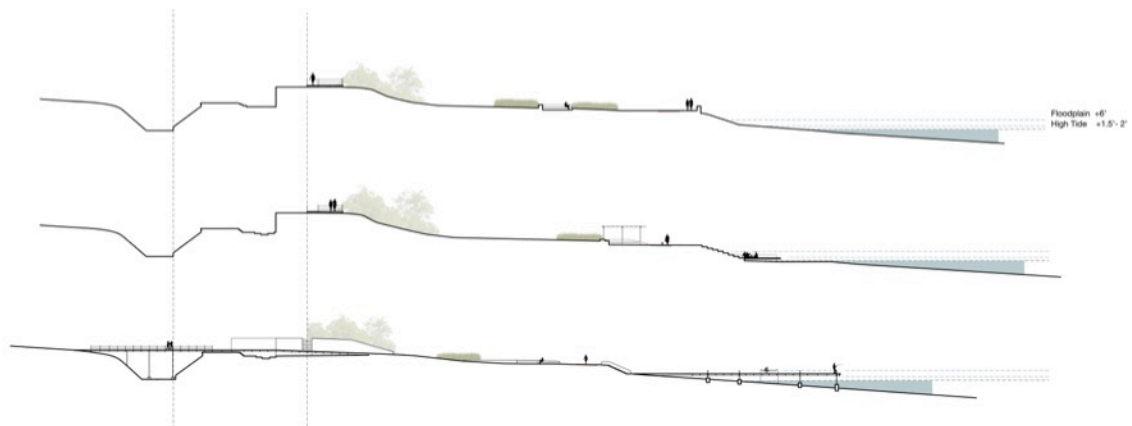


Figure 86 | Sections through the Battery axes and pavilions

PAVILION | IMMERSION



Figure 87 | Pavilion of Immersion (Source: Author)

The first pavilion, the Immersive Pavilion, is on axis with the first battery. After walking through the sliced portion of the battery, users come upon a pavilion made of concrete retaining walls and packed dirt ground plane. Wood benches and worktables are built into the sides to create spaces for fishermen to prepare their gear. The pavilion leads to a set of stairs that cut through the berm and lead down to a dock that extends into the river and immerses fishermen and other users into the river.

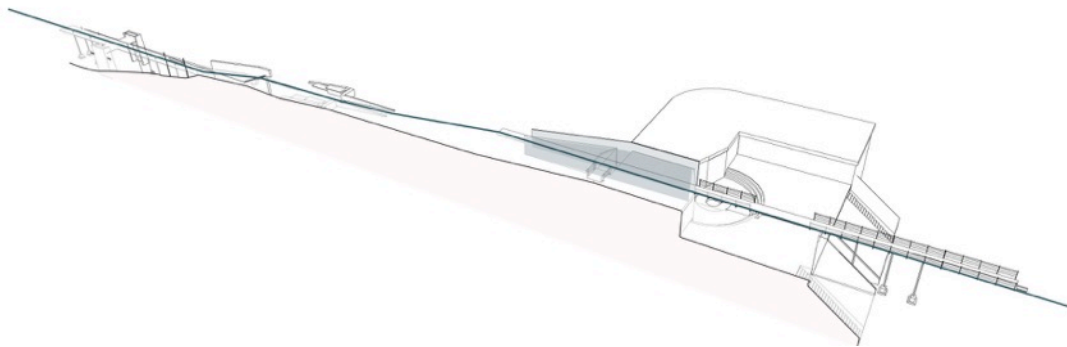


Figure 88 | Diagram of battery axis leading to Immersion Pavilion (Source: Author)

The second pavilion along the promenade is the Interactive Pavilion. This pavilion consists of a shaded outdoor classroom area with seating built onto its concrete retaining wall. Across from the classroom is a set of seating steps that lead down to a lower pavilion consisting of a steel mesh that allows water to flood it with the changes in tide. The lower pavilion sits on the edge of where land meets water, interacting with the tidal wetland along the edge. Here, environmental educators can hold demonstrative classes for field trip groups speaking to the tidal species found on site. Also here, users can step off of the pavilion into the wetland and can engage in exploration and interaction of the environment.

PAVILION | INTERACTION

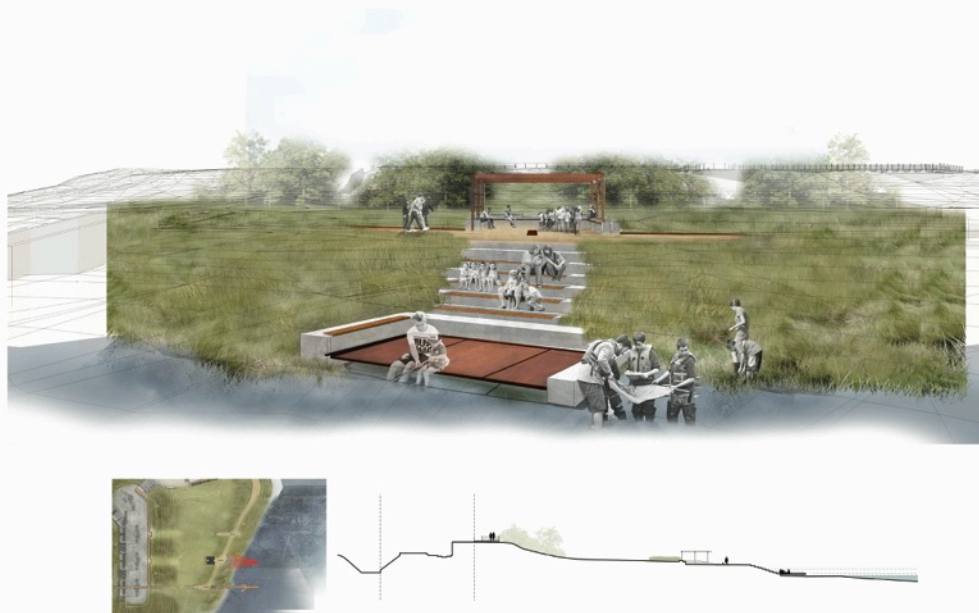


Figure 89 | The Interactive Pavilion (Source: Author)

The final pavilion on the promenade is the pavilion of Overlook. This pavilion is set back from the edge before it drops to the water. It overhangs the edge and provides an area of overlook and reflection for users. Across the promenade

from this overlook area is an embedded pavilion that sits within the tall tidal grasses on site. This provides a more private area for rest along the promenade.

PAVILION | OVERLOOK

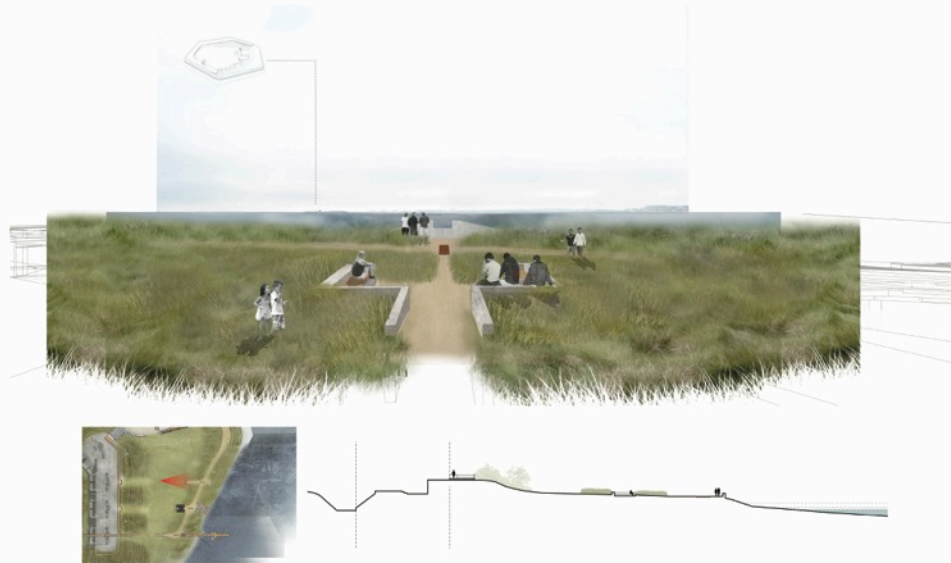


Figure 90 | Pavilion of Overlook (Source: Author)

ON THE PROMENADE

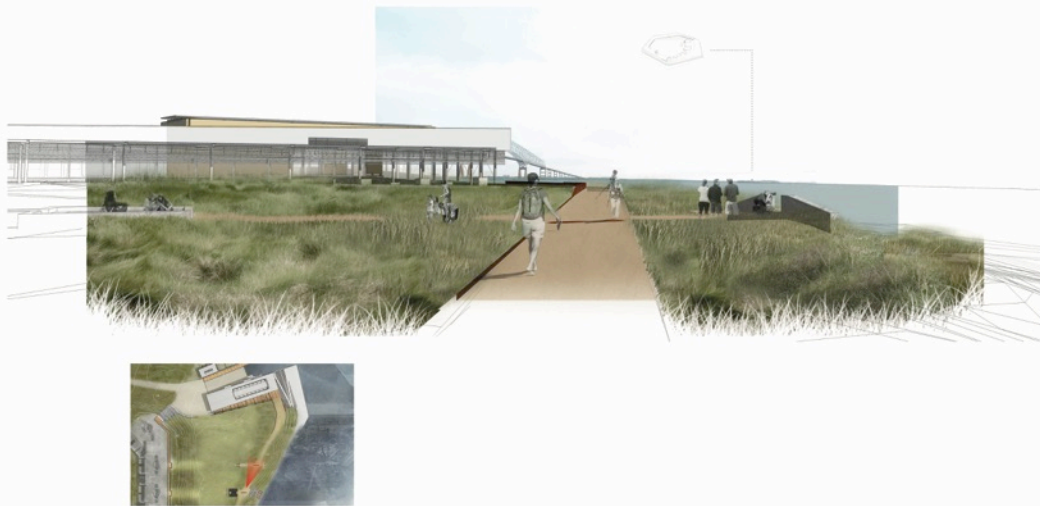


Figure 91 | On the Promenade viewing the Overlook Pavilion and Visitor's Center (Source: Author)

The sequence of pavilions along the promenade culminates at the Visitor's Center. The Visitor's Center is located along the sightline to Fort Carroll directly next to the Launch. It has a main central hall that is 30' wide and two flanking side aisles at 10' wide each. The aisle to the North along the Launch is open air and cuts balconies through the side of the retaining wall of the launch so that users can step out and observe the boaters. The Visitor's center is made of light steel frame set on piers to minimally invade the ground plane. It has a sloped roof lifting up towards Fort Carroll as its ground plane steps down to create a view portal out. The Visitor's Center leads out onto the set of Great Stairs upon which users can sit and take in the views or can continue down to the preserved portion of the sea wall for fishing.

PROMENADE APPROACH TO THE VISITOR'S CENTER

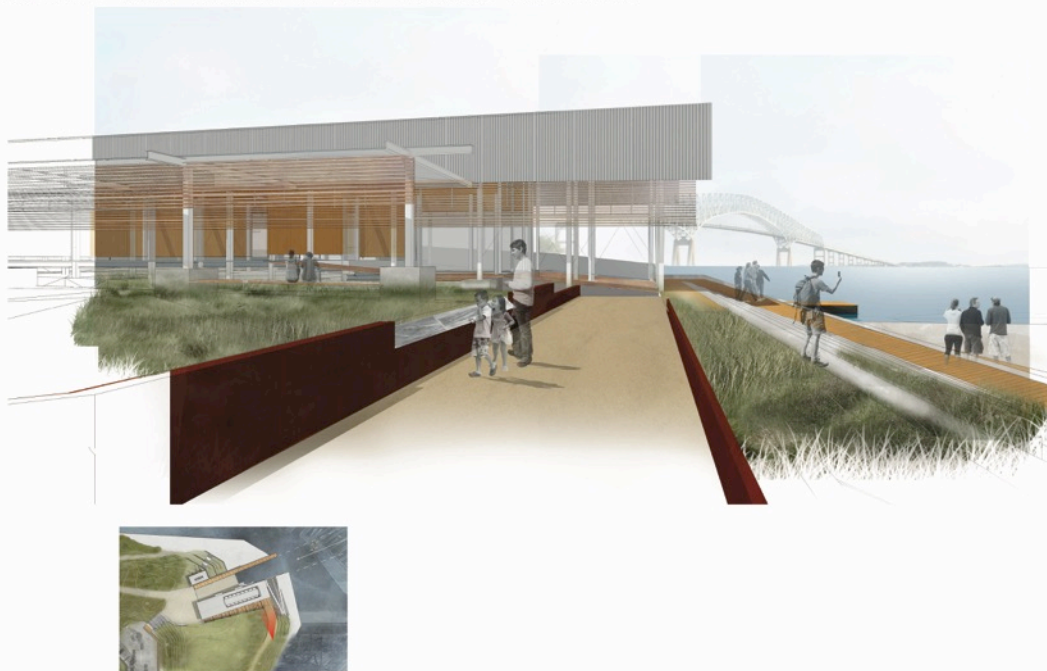


Figure 92 | Approaching the Visitor's Center (Source: Author)

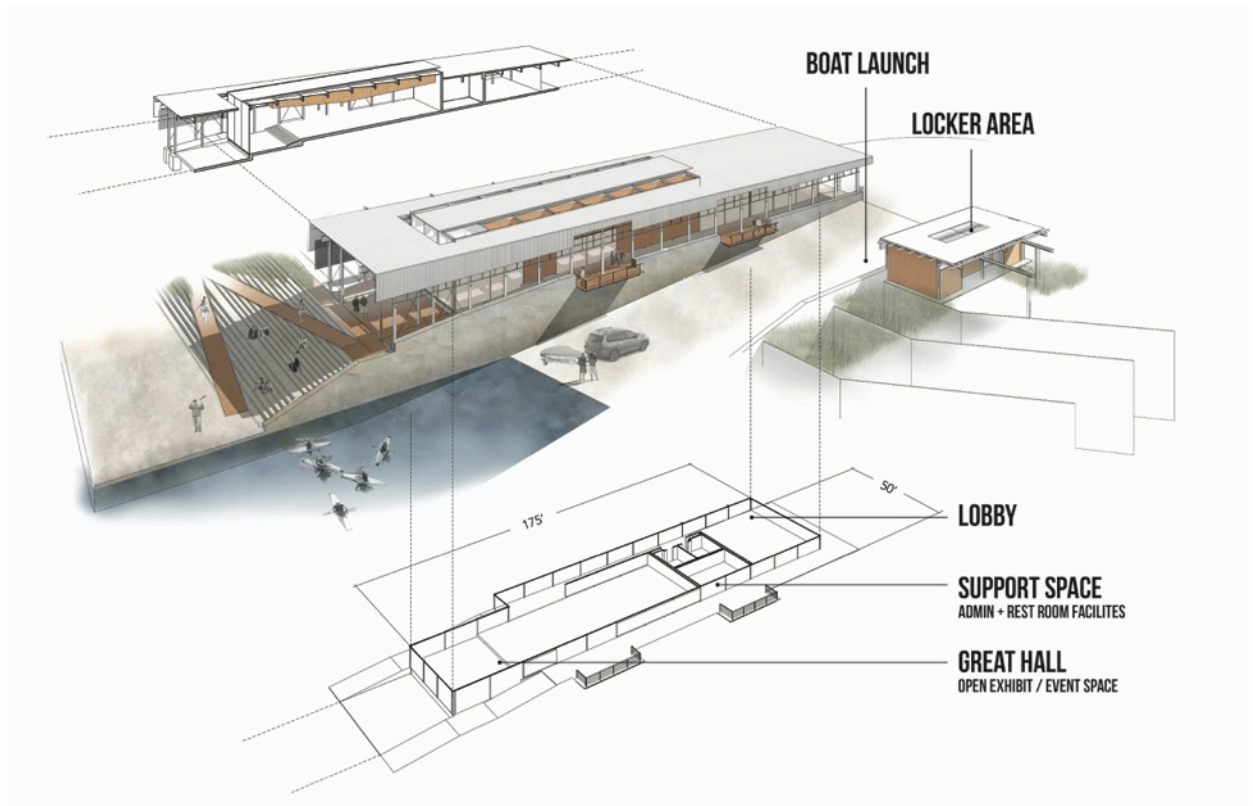


Figure 93 | Exploded Axon of Visitor's Center (Source: Author)

The Visitor's Center contains a lobby, support offices, rest facilities, and a Great Hall. The Great Hall has a folded plane made of wood planks floating above which compresses visitors below and then opens up to the view. Inside of the plane, HVAC ductwork is hidden. Flanking this plane are rows of skylights on both sides which guide the eye and the path out towards the view and the Great Stairs. The Great Hall can be used for events and historic exhibits.

Across the Launch from the Center is the Boater's locker facility area. When the Visitor's Center is closed, boaters can use this rest area for changing and cleansing after returning from a trip.

THE GREAT HALL



Figure 94 | The Great Hall at the Visitor's Center (Source: Author)

THE LAUNCH | BEGINNING THE JOURNEY



Figure 95 | View of the Launch and Visitor's Center from the water (Source: Author)

APPROACHING THE DOCKS

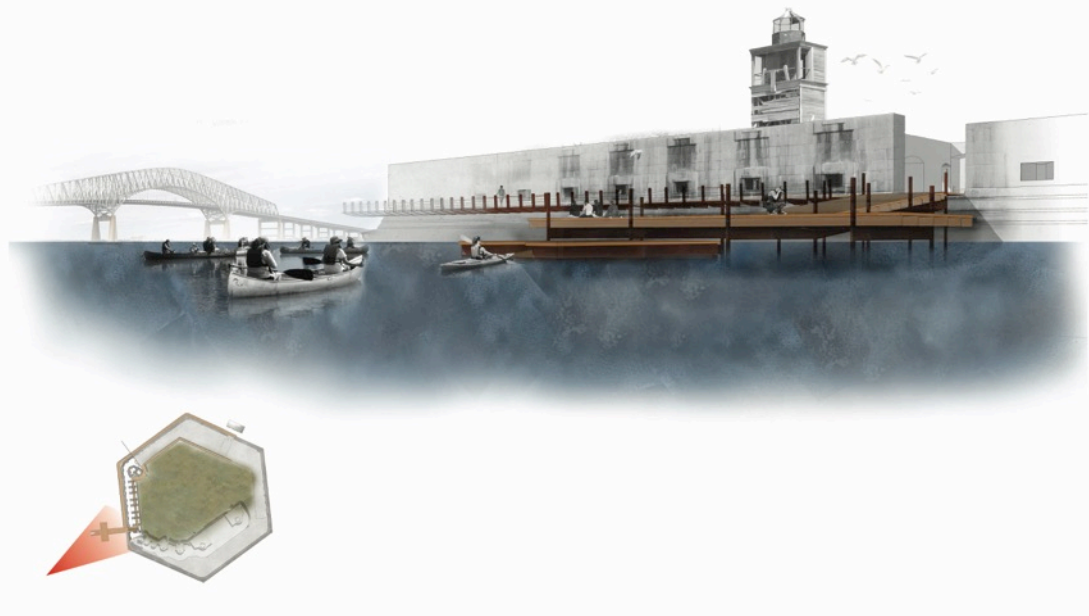


Figure 96 | Approach to Fort Carroll via new docks (Source: Author)

Fort Carroll

From the Launch, boaters take off on the journey to Fort Carroll. At Fort Carroll, they come upon an accessible dock that brings users up to two paths, one around the rampart wall perimeter and one through the arcade and up to the upper platform. This path is made of cor-ten steel and wood with a wire railing. Along this ramped path leading to the upper platform, there is a stopping point for overlook after users emerge from the arcade. Once reaching the top, users have an elevated point upon which to observe the ruins of Fort Carroll and the bird species that have overtaken the site.

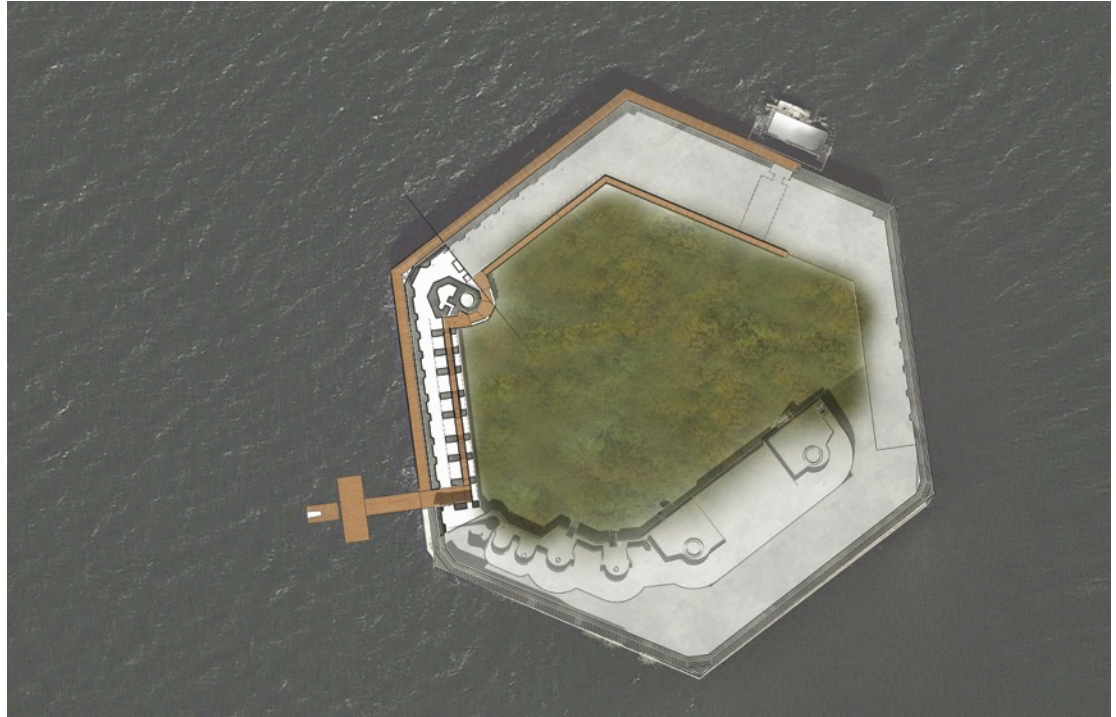


Figure 97 | Plan of proposal for Fort Carroll (Source: Author)

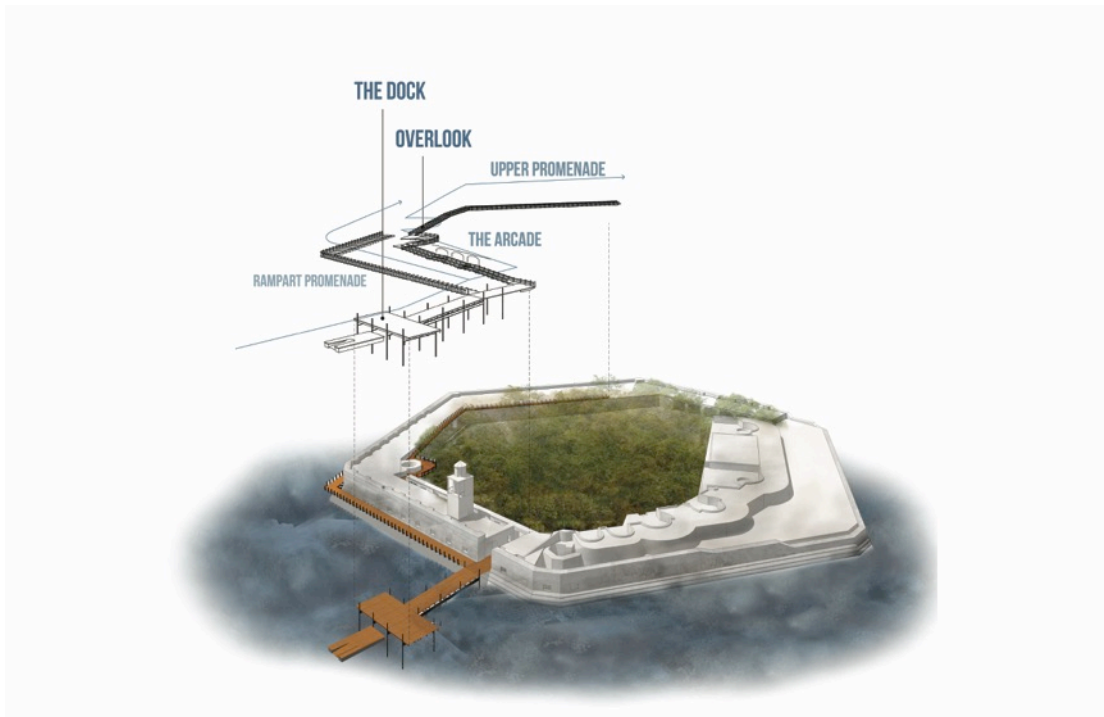


Figure 98 | Diagram of new spaces created at Fort Carroll (Source: Author)

WALKING THROUGH THE ARCADE

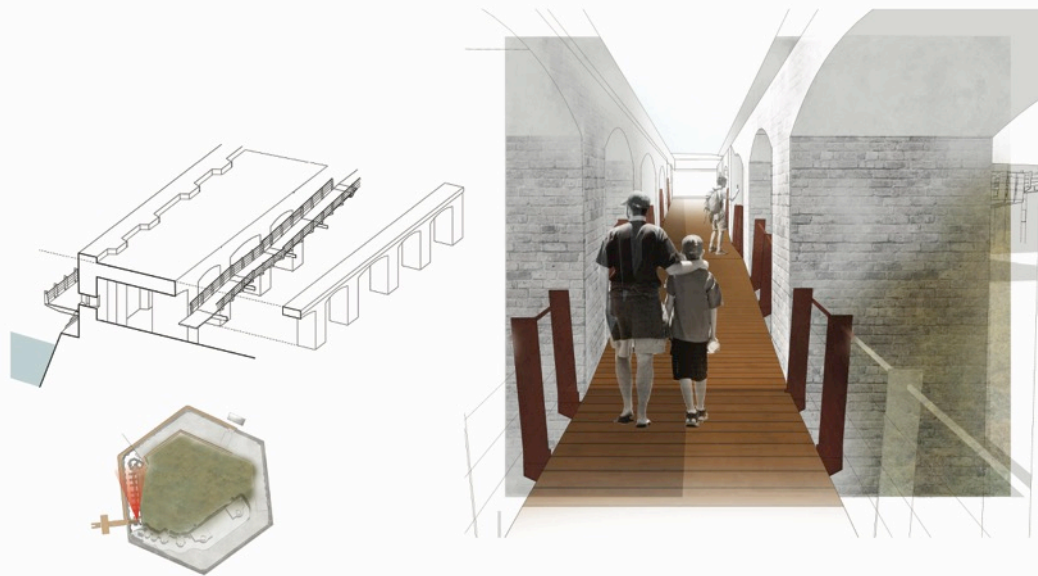


Figure 99 | Walking through the arcade and exploded axon of the arcade path (Source: Author)

WALKING ON THE UPPER PROMENADE

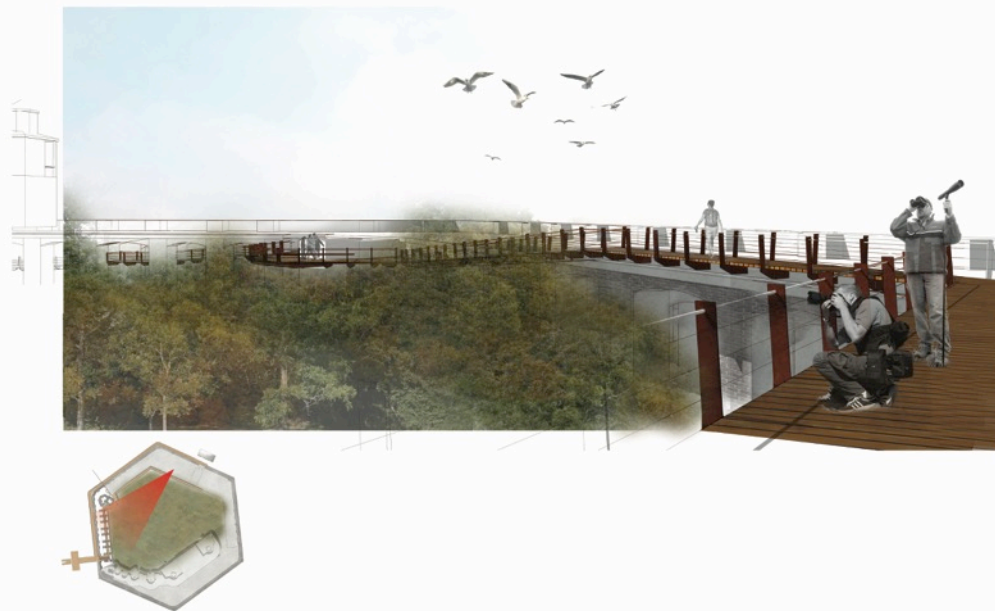


Figure 100 | Walking on the Upper Promenade (Source: Author)

In conclusion, these designed sequences aim to engage the public with these abandoned relics of the past. By weaving users through the forts and creating new sequences along historic sightlines and regulating axes of the forts, these forgotten structures become better integrated with their contexts and emerge from the background of the environments to active agents within these larger systems around them. The distinctive new layer of sequence does not intrude on or take away from the existing site and past layers of history but rather adds to its rich cultural landscape. Over time, it will become a part of the palimpsest that is the site, awaiting a new layer to be added on, thereby continuing the cycle of time and history.



Figure 101 | Aerial View of existing sites (Source: Author)

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